Search Strategy

- gp300 (gp140 dimer), gp140 (PRgp125/gp36), gp125 (SU), gp36 (TM), p200-250 (endo H-treated gp300), p80/90 (endo H-treated gp140/gp125)

- spec. only provides HIV-2 patient antisera

FILE 'USPATFULL' ENTERED AT 16:12:27 ON 25 JUN 2003

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                E HOVANESSIAN ARA G/IN
L1             12 S E2 OR E3
L2           3656 S (HIV-2 OR HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 OR SIV OR SIMIA
L3           2727 S L2 AND (ANTIBOD?)
L4            113 S L3 AND (GP300 OR GP140 OR GP125 OR GP36 OR P200 OR P90/80)
L5             69 S L4 AND (ANTIBOD?/CLM)
L6             62 S L5 NOT L1
L7             17 S L6 AND (GP300/CLM OR GP140/CLM OR GP125/CLM OR GP36/CLM OR P2
L8             45 S L6 NOT L7
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FILE 'WPIDS' ENTERED AT 16:31:49 ON 25 JUN 2003

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                E HOVANESSIAN A G/IN
L9              5 S E3
L10          1004 S (HIV-2 OR HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 OR SIV OR SIMIA
L11           389 S L10 AND (ANTIBOD?)
L12            21 S L11 AND (GP300 OR GP140 OR GP125 OR GP36 OR P200 OR P90?)
L13            17 S L12 NOT L9
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FILE 'MEDLINE' ENTERED AT 16:36:24 ON 25 JUN 2003

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                E HOVANESSIAN A G/AU
L14           154 S E3-E5
L15            14 S L14 AND (HIV-2 OR HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 OR SIV
                E REY M A/AU
L16           301 S E3 OR E2
L17            12 S L16 AND (HIV-2 OR HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 OR SIV
L18             8 S L17 NOT L15
L19         44835 S (HIV-2 OR HUMAN IMMUNODEFICIENCY VIRUS OR LYMPHADENOPATHY-ASS
L20          9882 S L19 AND (ANTIBOD? OR ANTISERA)
L21          2625 S L20 AND (ENV? OR GP300 OR GP140 OR GP125 OR GP36 OR P200 OR P
L22             0 S L21 AND PY=1985
L23            17 S L21 AND PY=1986
L24            82 S L21 AND PY=1987
L25           100 S L21 AND PY=1988
L26            17 S L25 AND (HIV-2 OR ARV-2)
L27          3587 S (HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 OR HIV-2)
L28          1228 S L27 AND (ANTISERA OR ANTIBOD?)
L29             0 S L28 AND PY=1985
L30             0 S L28 AND PY=1986
L31            27 S L28 AND PY=1987
L32          3761 S (SIV OR SIMIAN IMMUNODEFICIENCY VIRUS)
L33          1116 S L32 AND (ANTIBOD? OR ANTISERA)
L34             1 S L33 AND PY=1985
L35             2 S L33 AND PY=1986
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L36	8	S	L33 AND PY=1987
L37	29	S	(STLV-III)
L38	319	S	L27 AND (SEROLOG?)
L39	0	S	L38 AND PY=1985
L40	1	S	L38 AND PY=1986
L41	8	S	L38 AND PY=1987

L1 ANSWER 2 OF 12 USPATFULL
2001:111842 Immunogenic compositions comprising dimeric forms of the human immunodeficiency virus type 2 (HIV-2) and simian immunodeficiency virus (SIV) envelope glycoproteins.
Hovanessian, Ara G., Montreuil, France
Rey, Marie-Anne, Paris, France
Laurent, Anne G., Paris, France
Krust, Bernard, Paris, France
Montagnier, Luc, Le Plessis-Robinson, France
Institute Pasteur, Paris, France (non-U.S. corporation)
US 6261571 B1 20010717
APPLICATION: US 1994-364829 19941227 (8)
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to an isolated immune complex comprising a protein and an antibody that binds with said protein, wherein the protein is selected from the group consisting of gp80 of HIV-2 and gp65 of SIV, wherein said gp80 is a glycoprotein having an apparent molecular weight of 80 kDa, as determined by SDS-PAGE, and further wherein said gp65 is a glycoprotein having an apparent molecular weight of 65 kDa as determined by SDS-PAGE. Also provided are an immunogenic composition comprising an amount of gp80 protein of human immunodeficiency virus type 2 (HIV-2) sufficient to induce an immune response and a pharmaceutically acceptible carrier, and a composition comprising at least one antigen selected from the group consisting of gp80 protein of HIV-2 and gp65.sub.SIV.

CLM What is claimed is:
1. An isolated immune complex comprising a protein and an antibody that binds with said protein, wherein the protein is selected from the group consisting of gp80 of HIV-2 and gp65 of SIV, wherein said gp80 is a glycoprotein having an apparent molecular weight of 80 kDa, as determined by SDS-PAGE, and further wherein said gp65 is a glycoprotein having an apparent molecular weight of 65 kDa, as determined by SDS-PAGE.

2. The immune complex of claim 1, wherein the antibody, protein, or both the antibody and protein, are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

3. An isolated immune complex comprising a peptide and an antibody that binds with said peptide, wherein the peptide has the following sequence: VTAIEKYLQDQARLNSWGCAFRQVCH.

4. The immune complex of claim 3, wherein the antibody, peptide, or both the antibody and peptide, are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

5. An immunogenic composition comprising an amount of gp80 protein of human immunodeficiency virus type 2 (HIV-2) sufficient to induce an immune response and a pharmaceutically acceptable carrier.

6. The immunogenic composition of claim 5 further comprising one or more proteins of HIV-2 selected from the group consisting of gp125, gp140, and gp300 of HIV-2.

7. A composition comprising at least one antigen selected from the group

consisting of gp80 protein of HIV-2 and gp65 of SIV.

8. The composition of claim 7, further comprising one or more proteins selected from the group consisting of gp125, gp140, and gp300 of HIV-2.

L1 ANSWER 3 OF 12 USPATFULL
2001:105022 Immunological reagents and diagnostic methods for the detection of human immunodeficiency virus type 2 utilizing multimeric forms of the envelope proteins GP300, P200, and P90/80.
Montagnier, Luc, Le Plessis Robinson, France
Laurent-Crawford, Anne G., Paris, France
Krust, Bernard, Paris, France
Hovanessian, Ara G., Bourg-la-Reine, France
Rey-Cuille, Marie-Anne, Paris, France
Institut Pasteur, Paris Cedex, France (non-U.S. corporation)
US 2001006641 A1 20010705
APPLICATION: US 2000-739289 A1 20001219 (9)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Four glycoproteins of apparent molecular weights 300,000, 140,000, 125,000, and 36,000 (gp300, gp140, gp125, and gp36) are detectable in human immunodeficiency virus type 2 (HIV-2) infected cells. The gp125 and gp36 are the external and transmembrane components, respectively, of the envelope glycoproteins of HIV-2 mature virions. The gp300, which is a dimeric form of gp140, the precursor of HIV-2 envelope glycoprotein, is probably formed by a pH dependent fusion in the endoplasmic reticulum. Such a doublet is also observed in cells infected with simian immunodeficiency virus (SIV), a virus closely related to HIV-2. On the other hand, the envelope glycoprotein precursor of HIV-1 does not form a dimer during its processing. Experiments carried out with various inhibitors of oligosaccharide trimming enzymes suggest that transient dimerization of the glycoprotein precursor is required for its efficient transport to the Golgi apparatus and for its processing. The gp300 is useful for detecting antibodies to HIV-2 antigens in human body fluids and for raising antibodies to gp300.

CLM What is claimed is:
1. An isolated immune complex comprising a protein and an antibody that binds with said protein, wherein the protein is selected from the group consisting of gp300 of HIV-2, p200 of HIV-2, p90/80 of HIV-2, and gp300.sub.SIV.

2. The immune complex of claim 1, wherein the antibody, protein, or both the antibody and protein, are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

3. An isolated antibody which binds with a protein selected from the group consisting of gp300 of HIV-2, p200 of HIV-2, p90/80 of HIV-2, and gp300.sub.SIV.

4. The antibody of claim 3, wherein the antibody is labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

5. An immunogenic composition comprising a pharmaceutically effective amount of one or more proteins of human immunodeficiency virus type 2 (HIV-2) and a pharmaceutically acceptable carrier, wherein said proteins

are selected from the group consisting of gp300, p200, and p90/80 of HIV-2.

6. An in vitro diagnostic method for detecting infection of cells by human immunodeficiency virus type 2 (HIV-2), comprising: a) providing a composition comprising cells suspected of being infected with HIV-2; b) disrupting cells in the composition to expose intracellular proteins; and c) assaying the exposed intracellular proteins for the presence of one or more proteins selected from the group consisting of gp300 of HIV-2, p200 of HIV-2, p90/80 of HIV-2, and gp300.sub.SIV, wherein the presence of said one or more proteins is indicative of the presence of HIV-2.

7. The method of claim 6, wherein the assaying of exposed intracellular proteins is carried out by a method selected from the group consisting of electrophoresis of the proteins and immunoassay of the proteins with antibodies that are immunologically reactive with gp300 of HIV-2, p200 of HIV-2, p90/80 of HIV-2, or gp300.sub.SIV.

8. The method of claim 7, wherein the antibodies are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

9. An in vitro method for detecting antigens of human immunodeficiency virus type 2 (HIV-2), comprising: a) providing a composition suspected of containing antigens of HIV-2; and b) assaying the composition for the presence of one or more proteins selected from the group consisting of gp300, p200, and p90/80 of HIV-2, wherein the presence of said one or more proteins is indicative of the presence of antigens of HIV-2.

10. The method of claim 9, wherein said assaying of the composition is carried out by a method selected from the group consisting of electrophoresis of said proteins and immunoassay with antibodies that are immunologically reactive with gp300, p200, or p90/80 of HIV-2.

11. The method of claim 10, wherein the antibodies are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

12. An in vitro diagnostic method of distinguishing HIV-2 infection, or co-infection of HIV-1 and HIV-2, from HIV-1 infection in cells comprising: a) providing an extract comprising intracellular proteins of said cells; and b) assaying said extract for the presence of one or more proteins selected from the group consisting of gp300 of HIV-2, p200 of HIV-2, p90/80 of HIV-2, and gp300.sub.SIV, wherein the presence of said one or more proteins is indicative of the presence of HIV-2 infection or co-infection of HIV-1 and HIV-2.

13. The method of claim 12, wherein said assaying of the extract is carried out by a method selected from the group consisting of electrophoresis of said proteins and immunoassay with antibodies that are immunologically reactive with gp300, p200, or p90/80 of HIV-2.

14. The method of claim 13, wherein the antibodies are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

15. An in vitro diagnostic method for detecting the presence or absence

of antibodies which bind to a protein of HIV-2, comprising: a) contacting one or more proteins of HIV-2 selected from the group consisting of p90/80, p200, and gp300 of HIV-2 with a biological fluid for a time and under conditions sufficient for said proteins and antibodies in the biological fluid to form a protein-antibody immune complex; and b) detecting the formation of the complex.

16. The method of claim 15, wherein the detecting step further comprises measuring the formation of said immune complex.

17. The method of claim 15, wherein said one or more proteins are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

18. An in vitro diagnostic kit for detecting the presence or absence of antibodies which bind to a protein of HIV-2, comprising: a) one or more proteins of HIV-2 selected from the group consisting of p90/80, p200, and gp300 of HIV-2; and b) means for detecting the formation of immune complex between said proteins and said antibodies; wherein the proteins and the means are present in an amount sufficient to perform said detection.

19. The kit of claim 18, wherein the means for detecting the formation of the immune complex is an assay selected from the group consisting of radioimmunoassay, immunoenzymatic assay, and immunofluorescent assay.

20. An in vitro method for detecting antibodies in a sample of human body fluid which specifically bind to antigenic sites of an antigen, comprising: a) contacting said antigen with antibodies from human body fluid for a time and under conditions sufficient to permit formation of an antigen-antibody complex between said antigen and said antibodies; and b) detecting the formation of said antigen-antibody complex, wherein said antigen comprises a protein selected from the group consisting of p90/80 of HIV-2, p200 of HIV-2, gp300 of HIV-2, and gp300.sub.SIV.

L1 ANSWER 4 OF 12 USPATFULL
2001:32993 Immunological reagents and diagnostic methods for the detection of human immunodeficiency virus type 2 utilizing multimeric forms of the envelope proteins gp300, p200, and p90/80.
Montagnier, Luc, Robinson, France
Crawford, Anne G. Laurent, Paris, France
Krust, Bernard, Paris, France
Hovanessian, Ara G., Bourg-la-Reine, France
Cuille, Marie-Anne Rey, Paris, France
Institut Pasteur, France (non-U.S. corporation)
US 6197496 B1 20010306
APPLICATION: US 1994-321566 19941027 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Immunological reagents obtained from multimeric forms of the HIV-2 and SIV envelope glycoproteins and their use in the detection of HIV-2 are disclosed. Particularly, the HIV-2 proteins, gp300, p200, p90, and p80, and gp300 of SIV are described.

CLM What is claimed is:
1. A purified immune complex comprising a protein and an antibody that binds with said protein, wherein the protein is selected from the group

consisting of gp300 of HIV-2.sub.ROD having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis; p200 of HIV-2.sub.ROD having an apparent molecular weight of about 200 kDa as determined by SDS-PAGE analysis; p90/80 of HIV-2.sub.ROD having an apparent molecular weight of about 90 kDa to about 80 kDa as determined by SDS-PAGE analysis; and gp300 of SIV.sub.MAC having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis.

2. The immune complex of claim 1, wherein the antibody, protein, or both the antibody and protein, are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

3. An in vitro diagnostic method for detecting infection of cells by human immunodeficiency virus type 2 (HIV-2) comprising: a) providing a composition comprising cells suspected of being infected with HIV-2; b) disrupting cells in the composition to expose intracellular proteins; and c) assaying the exposed intracellular proteins for the presence of one or more proteins selected from the group consisting of gp300 of HIV-2.sub.ROD having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis; p200 of HIV-2.sub.ROD having an apparent molecular weight of about 200 kDa as determined by SDS-PAGE analysis; and p90/80 of HIV-2.sub.ROD having an apparent molecular weight of about 90 kDa to about 80 kDa as determined by SDS-PAGE analysis, and wherein the presence of said one or more proteins is indicative of the presence of HIV-2.

4. The method of claim 3, wherein assaying of exposed intracellular proteins is carried out by a method selected from the group consisting of electrophoresis of the proteins and immunoassay of the proteins with antibodies that are immunologically reactive with gp300 of HIV-2.sub.ROD, p200 of HIV-2.sub.ROD, and p90/80 of HIV-2.sub.ROD.

5. The method of claim 4, wherein the antibodies are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

6. An in vitro method for detecting antigens of human immunodeficiency virus type 2 (HIV-2), comprising: a) providing a composition suspected of containing antigens of HIV-2; and b) assaying the composition for the presence of one or more proteins selected from the group consisting of gp300 of HIV-2.sub.ROD having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis; p200 of HIV-2.sub.ROD having an apparent molecular weight of about 200 kDa as determined by SDS-PAGE analysis; p90/80 of HIV-2.sub.ROD having an apparent molecular weight of about 90 kDa to about 80 kDa as determined by SDS-PAGE analysis, and wherein the presence of said one or more proteins is indicative of the presence of antigens of HIV-2.

7. The method of claim 6, wherein said assaying of the composition is carried out by a method selected from the group consisting of electrophoresis of the proteins and immunoassay of the proteins with antibodies that are immunologically reactive with gp300, p200, or p90/80 of HIV-2.sub.ROD.

8. The method of claim 7, wherein the antibodies are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

9. An in vitro diagnostic method of distinguishing HIV-2 infection from HIV-1 infection in cells comprising: a) providing an extract comprising intracellular proteins of said cells; and b) assaying under conditions non-denaturing for gp300 said extract for the presence of one or more proteins selected from the group consisting of gp300 of HIV-2.sub.ROD having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis; p200 of HIV-2.sub.ROD having an apparent molecular weight of about 200 kDa as determined by SDS-PAGE analysis; p90/80 of HIV-2.sub.ROD having an apparent molecular weight of about 90 kDa to about 80 kDa as determined by SDS-PAGE analysis; and gp300 of SIV.sub.MAC having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis, and wherein the presence of said one or more proteins is indicative of the presence of HIV-2 infection.

10. The method of claim 9, wherein said assaying of the extract is carried out by a method selected from the group consisting of electrophoresis of said proteins and immunoassay with antibodies that are immunologically reactive with gp300, p200, or p90/80 of HIV-2.sub.ROD.

11. The method of claim 10, wherein the antibodies are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

12. An in vitro method for detecting the presence or absence of antibodies, which bind to a protein of HIV-2, comprising: a) contacting one or more proteins of HIV selected from the group consisting of gp300 of HIV-2.sub.ROD having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis; p200 of HIV-2.sub.ROD having an apparent molecular weight of about 200 kDa as determined by SDS-PAGE analysis; p90/80 of HIV2.sub.ROD having an apparent molecular weight of about 90 kDa to about 80 kDa as determined by SDS-PAGE analysis, with a biological fluid for a time and under conditions sufficient for said proteins and antibodies in the biological fluid to form a protein-antibody immune complex; and b) detecting the formation of the complex.

13. The method of claim 12, wherein the detecting step further comprises measuring the formation of said immune complex.

14. The method of claim 12, wherein said one or more proteins are labeled with an immunoassay label selected from the group consisting of radioisotopes, enzymes, fluorescent labels, chemiluminescent labels, and chromophore labels.

15. An in vitro diagnostic kit for detecting the presence or absence of antibodies, which bind to a protein of HIV-2, comprising: a) one or more proteins of HIV-2 selected from the group consisting of gp300 of HIV-2.sub.ROD having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis; p200 of HIV-2.sub.ROD having an apparent molecular weight of about 200 kDa as determined by SDS-PAGE analysis; p90/80 of HIV-2.sub.ROD having an apparent molecular weight of about 90 kDa to about 80 kDa as determined by SDS-PAGE analysis; and b) at least one reagent for detecting the formation of an immune complex between said proteins and said antibodies; and wherein the proteins and the at least one reagent are present in an amount sufficient to perform said detection.

16. The kit of claim 15, wherein the at least one reagent for detecting the formation of the immune complex is a reagent used in an assay

selected from the group consisting of radioimmunoassay, immunoenzymatic assay, and immunofluorescent assay.

17. An in vitro method for detecting antibodies in a sample of human body fluid, which specifically bind to antigenic sites of an antigen, comprising: a) contacting said antigen with antibodies from human body fluid for a time and under conditions sufficient to permit formation of an antigen-antibody complex between said antigen and said antibodies; and b) detecting the formation of said antigen-antibody complex, wherein said antigen comprises a protein selected from the group consisting of gp300 of HIV-2.sub.ROD having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis; p200 of HIV-2.sub.ROD having an apparent molecular weight of about 200 kDa as determined by SDS-PAGE analysis; p90/80 of HIV-2.sub.ROD having an apparent molecular weight of about 90 kDa to about 80 kDa as determined by SDS-PAGE analysis; and gp300 of SIV.sub.MAC having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE analysis.

18. The method of claim 4, wherein said assaying is carried out by electrophoresis of the proteins.

19. The method of claim 7, wherein said assaying is carried out by electrophoresis of the proteins.

L1 ANSWER 5 OF 12 USPATFULL
2000:53747 Immunogenic compositions comprising glycosylated and deglycosylated monomeric and dimeric forms of HIV-2 enveloped glycoproteins.
Montagnier, Luc, Le Plessis Robinson, France
Laurent-Crawford, Anne G., Paris, France
Krust, Bernard, Paris, France
Hovanessian, Ara G., Bourg-la-Reine, France
Cuille , Marie-Anne Rey, Paris, France
Institut Pasteur and Centre Nationale de la Recherche Scientifique (C.N.R.S.), Paris, France (non-U.S. corporation)
US 6056963 20000502
APPLICATION: US 1995-477596 19950607 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention is directed to a composition comprising one or more human immunodeficiency virus type 2 (HIV-2) envelope proteins and a pharmaceutically acceptable carrier. The proteins of the claimed invention are gp300, p200 and p90/80 of HIV-2. The composition is useful for the diagnostic assay of HIV-2 and as an antigen for the production of antibodies, for example.

CLM What is claimed is:
1. A composition comprising one or more human immunodeficiency virus type 2 (HIV-2) envelope proteins and a pharmaceutically acceptable carrier, wherein said proteins are selected from the group consisting of: gp300 of HIV-2 having an apparent molecular weight of about 300 kDa as determined by SDS-PAGE; p200 of HIV-2 having an apparent molecular weight of about 200 kDa as determined by SDS-PAGE; and p90/80 of HIV-2 having an apparent molecular weight of about 90 to about 80 kDa as determined by SDS-PAGE.

2. The composition of claim 1, wherein said protein is gp300.

3. The composition of claim 1, wherein said protein is p200.

4. The composition of claim 1, wherein said protein is p90/80.

L1 ANSWER 6 OF 12 USPATFULL
1998:112064 HIV-2 transmembrane glycoprotein homodimer (gp 80).
Hovanessian, Ara G., Montreuil, France
Rey, Marie-Anne, Paris, France
Laurent, Anne G., Paris, France
Krust, Bernard, Paris, France
Montagnier, Luc, Le Plessis-Robinson, France
Institut Pasteur, France (non-U.S. corporation)
US 5807992 19980915
APPLICATION: US 1995-466273 19950606 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Characterization of the envelope transmembrane protein of human immunodeficiency virus type 2 (HIV-2) was carried out using murine polyclonal and monoclonal antibodies or patient sera specific for HIV-2 proteins. A 80-Mr glycoprotein (gp80) was produced in HIV-2 infected cells along with three other glycoproteins that were recently reported: the extracellular glycoprotein (gp125), the envelope glycoprotein precursor (gp140), and the transient dimeric form of gp140 (gp300). The gp125 and gp80 were detectable after the synthesis of gp140 and the formation of gp300. Among these four glycoproteins, only gp80 and gp125 were associated with HIV-2 virions. As the other glycoproteins, gp80 was recognized by all HIV-2 positive sera. A murine polyclonal antibody raised against the purified gp300 recognized all four glycoproteins. On the other hand, a monoclonal antibody raised against a synthetic polypeptide deduced from the sequence of the transmembrane glycoprotein of HIV-2, recognized gp140, gp300 and gp80; thus indicating that gp80 should be related to the transmembrane protein of the envelope. Dimerization of envelope glycoprotein precursor and the transmembrane glycoprotein was also observed in cells infected with simian immunodeficiency virus (SIV), a virus closely related to HIV-2. Dimerization of the envelope precursors might be essential for the processing of these glycooroteins into the mature products, extracellular and transmembrane glycoproteins. Furthermore, the dimeric form of the transmembrane glycoproteins might be important for the optimal structure of the virus and thus for its infectivity.

CLM What is claimed is:
1. An immunogenic composition comprising a pharmaceutically effective amount of a glycoprotein in association with a pharmaceutically acceptable carrier thereof, wherein (A) said glycoprotein is a dimeric form of the transmembrane glycoprotein of HIV-2; (B) said glycoprotein has an apparent molecular weight of about 80 kDa (gp80); and (C) said glycoprotein is in an isolated form.

2. An immunogenic composition comprising a glycoprotein or a non-glycosylated protein thereof capable of eliciting antibody production, wherein (A) said glycoprotein is a dimeric form of the transmembrane glycoprotein of HIV-2; (B) said glycoprotein has an apparent molecular weight of about 80 kDa (gp80); and (C) said glycoprotein is in an isolated form.

L1 ANSWER 9 OF 12 USPATFULL
95:105693 HIV-2 transmembrane glycoprotein homodimer (gp 80).
Hovanessian, Ara G., Montreuil, France
Rey, Marie-Anne, Paris, France

Laurent, Anne G., Paris, France
Krust, Bernard, Paris, France
Montagnier, Luc, Le Plessis-Robinson, France
Institut Pasteur, France (non-U.S. corporation)
US 5470702 19951128
APPLICATION: US 1993-2756 19930113 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Character of the envelope transmembrane protein of human immunodeficiency virus type 2 (HIV-2) was carried out using murine polyclonal and monoclonal antibodies or patient sera specific for HIV-2 proteins. A 80-Mr glycoprotein (gp80) was produced in HIV-2 infected cells along with three other glycoproteins that were recently reported: the extracellular glycoprotein (gp125), the envelope glycoprotein precursor (gp140), and the transient dimeric form of gp140 (gp300). The gp125 and gp80 were detectable after the synthesis of gp140 and the formation of gp300. Among these four glycoproteins, only gp80 and gp125 were associated with HIV-2 virions. As the other glycoproteins, gp80 was recognized by all HIV-2 positive sera. A murine polyclonal antibody raised against the purified gp300 recognized all four glycoproteins. On the other hand, a monoclonal antibody raised against a synthetic polypeptide deduced from the sequence of the transmembrane glycoprotein of HIV-2, recognized gp140, gp300 and gp80; thus indicating that gp80 should be related to the transmembrane protein of the envelope. Dimerization of envelope glycoprotein precursor and the transmebrane glycoprotein was also observed in cells infected with simian immunodeficiency virus (SIV), a virus closely related to HIV-2. Dimerization of the envelope precursors might be essential for the processing of these glycoproteins into the mature products, extracellular and transmembrane glycoproteins. Furthermore, the dimeric form of the transmembrane glycoproteins might be important for the optimal structure of the virus and thus for its infectivity.

CLM What is claimed is:
1. A method for determining the presence or absence of human immunodeficiency virus type-2 (HIV-2) in a sample, wherein the method comprises: (A) providing a sample comprising cells suspected of being infected with HIV-2; (B) lysing said cells in the sample to expose intracellular proteins; (C) detecting the presence or absence of gp80 glycoprotein of HIV-2 in the sample by electrophoresis of said proteins; and (D) detecting the presence or absence of gp80 glycoprotein by immunoassay of the proteins with antibodies that are immunologically reactive with gp80 glycoprotein of HIV-2.

2. The method of claim 1, wherein said antibodies are labeled with a detectable label.

3. The method of claim 2, wherein said label is selected from the group consisting of a radioactive label, an enzyme label, a fluorescent label, a chemiluminescent label, and a chromophore label.

L1 ANSWER 10 OF 12 USPATFULL
94:42429 Dimer of the precursor of HIV-2 envelope glycoprotein.
Montagnier, Luc, Le Plessis Robinson, France
Hovanessian, Ara, Montreuil, France
Laurent, Anne, Paris, France
Krust, Bernard, Paris, France
Rey, Marie-Anne, Paris, France
Institut Pasteur, Paris, France (non-U.S. corporation)C.N.R.S., Paris,

France (non-U.S. corporation)
US 5312902 19940517
APPLICATION: US 1991-802712 19911206 (7)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Four glycoproteins of apparent molecular weights 300,000, 140,000, 125,000, and 36,000 (gp300, gp140, gp125, and gp36) are detectable in human immunodeficiency virus type 2 (HIV-2) infected cells. The gp125 and gp36 are the external and transmembrane components, respectively, of the envelope glycoproteins of HIV-2 mature virions. The gp300, which is a dimeric form of gp140, the precursor of HIV-2 envelope glycoprotein, is probably formed by a pH dependent fusion in the endoplasmic reticulum. Such a doublet is also observed in cells infected with simian immunodeficiency virus (SIV), a virus closely related to HIV-2. On the other hand, the envelope glycoprotein precursor of HIV-1 does not form a dimer during its processing. Experiments carried out with various inhibitors of oligosaccharide trimming enzymes suggest that transient dimerization of the glycoprotein precursor is required for its efficient transport to the Golgi apparatus and for its processing. The gp300 is useful for detecting antibodies to HIV-2 antigens in human body fluids and for raising antibodies to gp300.

CLM What is claimed is:

1. A glycoprotein of human immunodeficiency virus type 2 (HIV-2) wherein (A) said glycoprotein is a precursor of envelope protein of HIV-2; (B) said glycoprotein has an apparent molecular weight of about 300 kD (gp300); and (C) said glycoprotein is isolated from other HIV-2 proteins and glycoproteins.

2. A protein of human immunodeficiency virus type 2 (HIV-2), wherein (A) said protein is a precursor of an envelope protein of HIV-2; (B) said protein has an apparent molecular weight of about 200 kD (p200); (C) said protein is substantially unglycosylated; and (D) said protein is isolated from other HIV-2 proteins and glycoproteins.

3. A protein of human immunodeficiency virus type 2 (HIV-2), wherein (A) said protein is a precursor of an envelope protein of HIV-2; (B) said protein has an apparent molecular weight of about 90 to about 80 kD (p90/80); (C) said protein is substantially unglycosylated; and (D) said protein is isolated from other HIV-2 proteins and glycoproteins.

4. A glycoprotein of simian immunodeficiency virus (SIV), wherein (A) said glycoprotein is a precursor of an envelope glycoprotein of SIV; (B) said glycoprotein has an apparent molecular weight of about 300 kD (gp300.sub.SIV); and (C) said glycoprotein is isolated from other SIV proteins and glycoproteins.

5. A labeled antigen comprising a glycoprotein of human immunodeficiency virus type 2 (HIV-2), wherein (A) said glycoprotein is a precursor of envelope protein of HIV-2; (B) said glycoprotein has an apparent molecular weight of about 300 kD (gp300); (C) said glycoprotein is isolated from other HIV-2 proteins and glycoproteins; and (D) said antigen is labeled with an immunoassay label selected from the group consisting of radioisotope, enzyme, fluorescent, chemiluminescent, and chromophore labels.

6. A labeled antigen comprising a glycoprotein of simian immunodeficiency virus (SIV), wherein (A) said glycoprotein is a precursor of envelope protein of SIV; (B) said glycoprotein has an apparent molecular weight of about 300 kD (gp300.sub.SIV); (C) said

glycoprotein is isolated from other SIV proteins and glycoproteins; and (D) said antigen is labeled with an immunoassay label selected from the group consisting of radioisotope, enzyme, fluorescent, chemiluminescent, and chromophore labels.

L1 ANSWER 11 OF 12 USPATFULL
93:35771 HIV-2 transmembrane glycoprotein homodimer (GP 80).
Hovanessian, Ara G., Montrouil, France
Rey, Marie-Anne, Paris, France
Laurent, Anne G., Paris, France
Krust, Bernard, Paris, France
Montagnier, Luc, Le Plessis-Robinson, France
Institut Pasteur, France (non-U.S. corporation)
US 5208321 19930504
APPLICATION: US 1989-356459 19890525 (7)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Characterization of the envelope transmembrane protein of human immunodeficiency virus type 2 (HIV-2) was carried out using murine polyclonal and monoclonal antibodies or patient sera specific for HIV-2 proteins. A 80-Mr glycoprotein (gp80) was produced in HIV-2 infected cells along with three other glycoproteins that were recently reported: the extracellular glycoprotein (gp125), the envelope glycoprotein precursor (gp140), and the transient dimeric form of gp140 (gp300). The gp125 and gp80 were detectable after the synthesis of gp140 and the formation of gp300. Among these four glycoproteins, only gp80 and gp125 were associated with HIV-2 virions. As the other glycoproteins, gp80 was recognized by all HIV-2 positive sera. A murine polyclonal antibody raised against the purified gp300 recognized all four glycoproteins. On the other hand, a monoclonal antibody raised against a synthetic polypeptide deduced from the sequence of the transmembrane glycoprotein of HIV-2, recognized gp140, gp300 and gp80; thus indicating that gp80 should be related to the transmembrane protein of the envelope. Dimerization of envelope glycoprotein precursor and the transmembrane glycoprotein was also observed in cells infected with simian immunodeficiency virus (SIV), a virus closely related to HIV-2. Dimerization of the envelope precursors might be essential for the processing of these glycoproteins into the mature products, extracellular and transmembrane glycoproteins. Furthermore, the dimeric form of the transmembrane glycoproteins might be important for the optimal structure of the virus and thus for its infectivity.

CLM What is claimed is:
1. A glycoprotein of human immunodeficiency virus type 2 (HIV-2), wherein (a) said glycoprotein is a dimeric form of the transmembrane glycoprotein of HIV-2; (b) said glycoprotein has an apparent molecular weight of about 80 kDa (gp80) as indicated by gel electrophoresis; and (c) said glycoprotein is isolated from other HIV-2 proteins and glycoproteins from HIV-2 infected cells.

2. A non-glycosylated dimeric form of the transmembrane protein of human immunodeficiency virus type 2 (HIV-2), wherein (a) the glycosylated form of said protein has an apparent molecular weight of about 80 kDa as indicated by gel electrophoresis; and (b) said protein is isolated from other HIV-2 proteins and glycoproteins from HIV-2 infected cells.

3. A labeled antigen comprising a glycoprotein of human immunodeficiency virus type 2 (HIV-2), wherein (a) said glycoprotein is a dimeric form of the transmembrane glycoprotein of HIV-2; (b) said glycoprotein has an

apparent molecular weight of about 80 kDa (gp80) as indicated by gel electrophoresis; (c) said glycoprotein is isolated from other HIV-2 proteins and glycoproteins from HIV-2 infected cells; and (d) said antigen is labeled with a label selected from the group consisting of a radioisotope, an enzyme, a fluorescent label, a chemiluminescent label and a chromophore label.

4. A labeled antigen comprising the non-glycosylated dimeric transmembrane protein of claim 2, wherein said antigen is labeled with a label selected from the group consisting of a radioisotope, an enzyme, a fluorescent label, a chemiluminescent label and a chromophore label.

5. An in vitro diagnostic method for the detection of the presence or absence of an antibody capable of binding to an antigen of HIV-2, said method comprising: contacting a biological sample with the glycoprotein of claim 1 for a time and under conditions sufficient for said glycoprotein and said antibody to form an antigen-antibody complex; and detecting the formation of said complex.

6. The method of claim 5, wherein said detection step further comprises measuring the amount of said antigen-antibody complex.

7. A diagnostic kit for the detection of the presence or absence of an anti-HIV-2 antibody capable of binding to an antigen of HIV-2, said kit comprising the protein of claim 1 in an amount sufficient to perform said detection.

8. The diagnostic kit of claim 7, wherein said protein is detectably labeled with a label selected from the group consisting of a radioisotope, an enzyme, a fluorescent label, a chemiluminescent label and a chromophore label.

9. The diagnostic kit of claim 7, further comprising an anti-immunoglobulin antibody capable of binding to said anti-HIV-2 antibody, wherein said anti-immunoglobulin antibody is present in an amount sufficient to perform said detection.

10. The diagnostic kit of claim 9, wherein said anti-immunoglobulin antibody is detectably labeled with a label selected from the group consisting of a radioisotope, an enzyme, a fluorescent label, a chemiluminescent label and a chromophore label.

L7 ANSWER 17 OF 17 USPATFULL
89:47788 Retrovirus capable of causing AIDS, antigens obtained from this retrovirus and corresponding antibodies and their application for diagnostic purposes.
Montagnier, Luc, Robinson, France
Guetard, Denise, Paris, France
Brun-Vezinet, Francoise, Paris, France
Clavel, Francois, Paris, France
Institut Pasteur, Paris, France (non-U.S. corporation)
US 4839288 19890613
APPLICATION: US 1986-835228 19860303 (6)
PRIORITY: FR 1986-910 19860122
FR 1986-911 19860122
FR 1986-1635 19860206
FR 1986-1985 19860213
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a new variety of retroviruses designated human

immunodeficiency virus type II, HIV-II, samples of which have been deposited at CNCM as I-502 and I-532. It also concerns purified forms of the antigens which can be obtained from this virus, in particular from the gp 36 and gp 130-140 proteins. These various antigens are useful in medical diagnosis, in particular by being placed in contact with serum of the patient to be diagnosed. Lastly, the invention relates to immunizing compositions, in particular containing at least one of glycoproteins gp 36 and gp 130-140.

CLM What is claimed is:

1. A human retrovirus, wherein the retrovirus is Human Immunodeficiency Virus Type 2 (HIV-2) in a biologically pure form.

2. An in vitro culture of Human Immunodeficiency Virus Type 2 (HIV-2) as claimed in claim 1.

3. A suspension of Human Immunodeficiency Virus Type 2 (HIV-2) as claimed in claim 1 in a buffer therefor, wherein the suspension comprises protein antigen, glycoprotein antigen, or a mixture of protein and glycoprotein antigens of the retrovirus and the antigen is capable of being immunologically recognized by serum of a patient afflicted with Lymphadenopathy Syndrome (LAS) or Acquired Immune Deficiency Syndrome (AIDS).

4. A labeled antigen of Human Immunodeficiency Virus Type 2 (HIV-2) as claimed in claim 1, wherein the antigen is protein antigen, glycoprotein antigen, or a mixture of protein and glycoprotein antigens, and the antigen is capable of being immunologically recognized by sera of a patient afflicted with Lymphadenopathy Syndrome (LAS) or Acquired Immune Deficiency Syndrome (AIDS); and wherein said antigen is labeled with an immunoassay label selected from the group consisting of radioactive, enzymatic, and fluorescent labels.

5. A supernatant of a cell culture infected with Human Immunodeficiency Virus Type 2 as claimed in claim 1, wherein the supernatant comprises protein antigen, glycoprotein antigen, or a mixture of protein and glycoprotein antigens of the retrovirus and the antigen is capable of being immunologically recognized by serum of a patient afflicted with Lymphadenopathy Syndrome (LAS) or Acquired Immune Deficiency Syndrome (AIDS).

6. A composition containing at least one protein or glycoprotein of Human Immunodeficiency Virus Type 2 (HIV-2) as claimed in claim 1, free of human cells and of other LAV-II proteins.

7. Human retrovirus as claimed in claim 1, wherein said retrovirus is cytopathic to human T4 lymphocytes and is comprised of proteins or glycoproteins that are immunologically cross-reactive with antibodies to proteins and glycoproteins of LAV-II.

8. Antigen of Human Immunodeficiency Virus Type 2 (HIV-2), wherein the antigen is protein antigen, glycoprotein antigen, or a mixture of protein and glycoprotein antigens and the antigen is free of human cells and of other LAV-II proteins and is capable of being immunologically recognized by serum of a patient afflicted with Lymphadenopathy Syndrome

(LAS) or Acquired Immune Deficiency Syndrome (AIDS).

9. Antigen as claimed in claim 8, wherein the antigen is a protein.

10. Antigen as claimed in claim 9, wherein the antigen is an external envelope protein.

11. Antigen as claimed in claim 9, wherein the antigen is a transmembrane protein.

12. Antigen as claimed in claim 9, wherein the antigen is a major core protein.

13. Antigen as claimed in claim 9, wherein the antigen is a core protein, other than a major core protein.

14. An immunological complex between the antigen of claim 8 and an antibody recognizing said antigen.

15. The immunological complex of claim 14, wherein the complex is labeled with an immunoassay label selected from the group consisting of radioactive, enzymatic, and fluorescent labels.

16. The immunological complex of claim 14, wherein said antigen comprises a major core protein of said virus.

17. The immunological complex of claim 16, wherein the complex is labeled with an immunoassay label selected from the group consisting of radioactive, enzymatic, and fluorescent labels.

18. Antigen as claimed in claim 8, wherein the antigen is labeled with an immunoassay label selected from the group consisting of radioactive, enzymatic, and fluorescent labels.

19. Antigen as claimed in claim 10, wherein the antigen is labeled with an immunoassay label selected from the group consisting of radioactive, enzymatic, and fluorescent labels.

20. Antigen as claimed in claim 11, wherein the antigen is labeled with an immunoassay label selected from the group consisting of radioactive, enzymatic, and fluorescent labels.

21. Antigen as claimed in claim 12, wherein the antigen is labeled with an immunoassay label selected from the group consisting of radioactive, enzymatic, and fluorescent labels.

22. Antigen as claimed in claim 13, wherein the antigen is labeled with an immunoassay label selected from the group consisting of radioactive, enzymatic, and fluorescent labels.

23. An extract of Human Immunodeficiency Virus Type 2 (HIV-2),
wherein the extract comprises protein antigen, glycoprotein antigen, or a mixture of protein and glycoprotein antigens of the retrovirus and the antigen is free of human cells and of other LAV-II proteins and is capable of being immunologically recognized by serum of a patient afflicted with Lymphadenopathy Syndrome (LAS) or Acquired Immune Deficiency Syndrome (AIDS).

24. Retroviral extract as claimed in claim 23, wherein the extract contains external envelope protein of said retrovirus.

25. Retroviral extract as claimed in claim 23, wherein the extract contains transmembrane protein of said retrovirus.

26. Retroviral extract as claimed in claim 23, wherein the extract contains major core protein of said retrovirus.

27. Retroviral extract as claimed in claim 23, wherein the extract contains core protein other than major core protein of said retrovirus.

28. A lysate of Human Immunodeficiency Virus Type 2 (HIV-2), wherein the lysate comprises protein antigen, glycoprotein antigen, or a mixture of protein and glycoprotein antigens of the retrovirus and the antigen is free of human cells and of other LAV-II proteins and is capable of being immunologically recognized by serum of a patient afflicted with Lymphadenopathy Syndrome (LAS) or Acquired Immune Deficiency Syndrome (AIDS).

29. Retroviral lysate as claimed in claim 28, wherein the lysate comprises external envelope protein of said retrovirus.

30. Retroviral lysate as claimed in claim 28, wherein the lysate comprises transmembrane protein of said retrovirus.

31. Retroviral lysate as claimed in claim 28, wherein the lysate comprises major core protein of said retrovirus.

32. Retroviral lysate as claimed in claim 28, wherein the lysate comprises core protein other than major core protein of said retrovirus.

33. Supernatant as claimed in claim 5, wherein the supernatant comprises external envelope protein of said retrovirus.

34. Supernatant as claimed in claim 5, wherein the supernatant comprises transmembrane protein of said retrovirus.

35. Supernatant as claimed in claim 5, wherein the supernatant comprises major core protein of said retrovirus.

36. Supernatant as claimed in claim 5, wherein the supernatant comprises core protein other than major core protein of said retrovirus.

37. Composition as claimed in claim 6, wherein the composition contains proteins of Lymphadenopathy Associated Virus Type 1 (LAV-1), glycoproteins of LAV-1, or a mixture of proteins and glycoproteins of LAV-1.

38. Composition as claimed in claim 6, wherein the composition contains at least one protein or glycoprotein of said virus selected from the group consisting of p16, p26, gp36, and gp130-140.

39. Composition as claimed in claim 6, wherein the composition contains p26 protein and gp36 glycoprotein of said virus.

40. Composition as claimed in claim 6, wherein the composition contains p26 protein and gp36 glycoprotein and gp 130-140 glycoprotein of said virus.

41. Composition as claimed in claim 6, wherein the composition contains p16 and p26 proteins of said virus.

42. Composition as claimed in claim 41, wherein the composition contains p16 and p26 proteins and gp130-140 glycoproteins of said virus.

43. Composition as claimed in claim 6, wherein the composition contains gp36 glycoprotein of said virus.

44. Composition as claimed in claim 6, wherein said composition contains 10 to 500 micrograms of said protein and glycoprotein.

45. Composition as claimed in claim 6, wherein said composition contains 10 to 50 micrograms of said protein and glycoprotein.

46. Composition as claimed in claim 6, wherein said composition contains a pharmaceutically acceptable vehicle.

47. Isolate of a retrovirus, wherein the retrovirus has the identifying characteristics of the virus deposited under culture collection accession number C.N.C.M. No. I-502.

48. Isolate of a retrovirus, wherein the retrovirus has the identifying characteristics of the virus deposited under culture collection accession number C.N.C.M. No. I-532.

L7 ANSWER 16 OF 17 USPATFULL
91:54855 Retrovirus capable of causing AIDS, antigens obtained from this retrovirus and corresponding antibodies and their application for diagnostic purposes.
Montagnier, Luc, Le Plessis Robinson, France
Guetard, Denise, Paris, France
Brun-Vezinet, Francoise, Paris, France
Clavel, Francois, Paris, France
Institut Pasteur, Paris, France (non-U.S. corporation)
US 5030718 19910709
APPLICATION: US 1990-462984 19900110 (7)
PRIORITY: FR 1986-910 19860122
FR 1986-911 19860122
FR 1986-1635 19860206
FR 1986-1985 19860213
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a new variety of retroviruses designated Human Immunodeficiency virus Type II, HIV-II, samples of which have been deposited at CNCM as I-502 and I-532. It also concerns purified forms of the antigens which can be obtained from this virus, in particular from the gp 36 and gp 130-140 proteins. These various antigens are useful in medical diagnosis and kits, in particular by being placed in contact with serum of the patient to be diagnosed. Lastly, the invention relates to immunizing compositions, in particular containing at least one of glycoproteins gp 36 and gp 130-140.

CLM What is claimed is:
1. An antibody formed against human immunodeficiency virus type 2 (HIV-2), wherein the antibody is in biologically pure form.

2. The antibody as claimed in claim 1, wherein the antibody is formed against p16 protein specific to HIV -2, or peptides derived from said protein.

3. The antibody as claimed in claim 1, wherein the antibody is formed against p26 protein specific to HIV -2, or peptides derived from said protein.

4. The antibody as claimed in claim 1, wherein the antibody is formed against gp36 glycoprotein of HIV-2, or peptides derived from said glycoprotein.

5. The antibody as claimed in claim 1, wherein the antibody is formed against gp130-140 glycoprotein of HIV -2, or peptides derived from said glycoprotein.

6. The antibody as claimed in claim 1, which is a polyclonal antibody.

7. The antibody as claimed in claim 1, which is a monoclonal antibody.

8. An antibody that is formed against an immunological complex, wherein the complex comprises an antigen of Human Immunodeficiency Virus Type 2 (HIV-2) and antibody to said antigen.

L7 ANSWER 13 OF 17 USPATFULL
93:89569 Monoclonal antibody to HIV-2 and uses thereof.
Chin, Jade, Edison, NJ, United States
Abbott Laboratories, Abbott Park, IL, United States (U.S. corporation)
US 5256561 19931026
APPLICATION: US 1991-811592 19911220 (7)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A monoclonal antibody which specifically binds to HIV -2 gp36 antigen and does not specifically bind to HIV-1 antigens. The monoclonal antibody is useful in immunoassays as a capture reagent, as part of an indicator reagent, and/or as a positive control.

CLM What is claimed is:
1. A monoclonal antibody that specifically binds to HIV-2 gp36 antigen and does not bind to HIV-1 antigens, which is secreted by the cell line A.T.C.C. Deposit No. HB 10908.

2. A hybridoma cell line which secretes a monoclonal antibody which specifically binds to HIV-2 gp36 antigen and does not specifically bind to HIV-1 antigens, wherein the cell line is A.T.C.C Deposit No. HB 10908.

L7 ANSWER 11 OF 17 USPATFULL
1999:40572 Methods and kits for the detection of human immunodeficiency virus type 2 employing HIV-2 specific antibodies and antigens.
Montagnier, Luc, Le Plessis, France
Guetard, Denise, Paris, France
Brun-Vezinet, Francoise, Paris, France
Clavel, Francois, Paris, France
Institut Pasteur, Paris, France (non-U.S. corporation)

US 5889158 19990330
APPLICATION: US 1995-466704 19950606 (8)
PRIORITY: FR 1986-910 19860122
FR 1986-911 19860122
FR 1986-1635 19860206
FR 1986-1985 19860213
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention discloses the identification and characterization of a novel human retrovirus, originally designated lymphadenopathy-associated virus type II, or LAV-II, and subsequently redesignated the human immunodeficiency virus type 2, or HIV-2. This virus was isolated from West African AIDS patients and propagated on immortalized lymphocytic cell lines or donor peripheral blood mononuclear cells (PBMCs). Immunological and nucleic acid hybridization studies demonstrated that HIV-2 differs significantly from HIV-1, the aetiological agent of AIDS. Additional biochemical characterization identified viral antigens having molecular weights of 16, 26, 36, and 130-140 kDa, as determined by SDS-PAGE. These proteins were subsequently designated p16, p26, gp36, and gp130-140, respectively. These antigens can be employed, inter alia, in the generation of both polyclonal and monoclonal antibodies, which should prove useful in diagnostic and viral antigen purification applications.

CLM What is claimed is:
1. A purified antibody which binds specifically to gp36 of human immunodeficiency virus type 2 (HIV-2).

2. The antibody according to claim 1, wherein said antibody is a monoclonal antibody.

3. A purified antibody which binds specifically to p16 of human immunodeficiency virus type 2 (HIV-2).

4. The antibody according to claim 3, wherein said antibody is a monoclonal antibody.

5. A purified antibody which binds specifically to p26 of human immunodeficiency virus type 2 (HIV-2).

6. The antibody according to claim 5, wherein said antibody is a monoclonal antibody.

7. The antibody according to any one of claims 1-6, wherein the antibody is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, a fluorescent label, a chemiluminescent label, and a chromophore label.

L8 ANSWER 43 OF 45 USPATFULL
97:7997 Retrovirus human immunodeficiency virus type 2(HIV2), capable of causing AIDS, antigens obtained from this retrovirus and corresponding antibodies and their application for diagnostic purposes.
Montagnier, Luc, Le Plessis Robinson, France
Guetard, Denise, Paris, France
Brun-Vezinet, Francoise, Paris, France

Clavel, Francois, Paris, France
Institut Pasteur, Paris, France (non-U.S. corporation)
US 5597896 19970128
APPLICATION: US 1994-202260 19940225 (8)
PRIORITY: FR 1986-910 19860122
FR 1986-911 19860122
FR 1986-1635 19860206
FR 1986-1985 19860213
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a new variety of retroviruses designated Human Immunodeficiency Virus Type 2 (HIV-2), samples of which have been deposited at CNCM and having Accession Numbers I-502 and I-532. The invention also concerns purified forms of the antigens which can be obtained from this virus, in particular from the gp36 and gp130-140 envelope glycoproteins. These various antigens are useful in medical diagnosis and kits, in particular by being placed in contact with serum of the patient to be diagnosed. The invention further relates to polyclonal and monoclonal antibodies specific for the antigens of HIV-2, particularly antibodies specific for gp130-140 envelope glycoprotein. Lastly, the invention relates to immunizing compositions, in particular containing at least one of glycoproteins gp36 or gp130-140.

CLM What is claimed is:

1. A polyclonal antibody which specifically binds with the gp130-140 envelope glycoprotein of Human Immunodeficiency Virus Type 2 (HIV-2), said polyclonal antibody obtained from the sera of an animal inoculated with a composition comprising HIV-2 or envelope glycoproteins thereof.

2. A monoclonal antibody which specifically binds with the gp130-140 envelope glycoprotein of Human Immunodeficiency Virus Type 2 (HIV-2).

L9 ANSWER 1 OF 5 WPIDS (C) 2003 THOMSON DERWENT
AN 2001-389285 [41] WPIDS
CR 1990-039082 [06]; 1990-361260 [48]; 2000-338595 [29]; 2001-256359 [20]
DNC C2001-118669
TI Immune complex comprising a protein selected from gp300, p90/80, p200 of human immunodeficiency virus type 2 (HIV-2) and gp300SIV and an antibody that binds with the protein, useful in the detection of HIV-2 infections.
DC B04 D16
IN HOVANESSIAN, A G; KRUST, B; LAURENT-CRAWFORD, A G; MONTAGNIER, L; REY-CUILLE, M
PA (INSP) INST PASTEUR
CYC 1
PI US 2001006641 A1 20010705 (200141)* 22p
ADT US 2001006641 A1 CIP of US 1988-204346 19880609, Div ex US 1989-356459 19890525, Cont of US 1991-804712 19911212, CIP of US 1993-2756 19930113, Cont of US 1994-321566 19941027, US 2000-739289 20001219
FDT US 2001006641 A1 Div ex US 5208321, CIP of US 5470702, Cont of US 6197496
PRAI US 1994-321566 19941027; US 1988-204346 19880609; US 1989-356459 19890525; US 1991-804712 19911212; US 1993-2756 19930113; US 2000-739289 20001219

AB US2001006641 A UPAB: 20010724
NOVELTY - An isolated immune complex (C1) comprising a protein and an antibody (Ab1) that binds with the protein (P1), where P1 is selected from gp300 of human immunodeficiency virus type 2 (HIV-2), p200 of HIV-2, p90/80 of HIV-2, and gp300SIV, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated Ab1;

(2) an immunogenic composition comprising a pharmaceutically effective amount of one or more proteins of HIV-2, where the proteins are selected from gp300, p200, and p90/80 of HIV-2;

(3) an in vitro diagnostic method (M1) for detecting infection of cells HIV-2, comprising providing a composition comprising cells suspected of being infected with HIV-2, disrupting cells in the composition to expose intracellular proteins, and assaying the exposed intracellular proteins for the presence of one or more proteins selected from P1, where the presence of the proteins is indicative of the presence of HIV-2;

(4) an in vitro method (M2) for detecting antigens of HIV-2, comprising providing a composition suspected of containing antigens of HIV-2 and assaying the composition for the presence of one or more proteins selected from gp300, p200, and p90/80 of HIV-2, where the presence of the proteins is indicative of the presence of antigens of HIV-2;

(5) an in vitro diagnostic method (M3) of distinguishing HIV-2 infection, or co-infection of HIV-1 and HIV-2, from HIV-1 infection in cells comprising providing an extract comprising intracellular proteins of the cells and assaying the extract for the presence of one or more proteins selected from P1, where the presence of the proteins is indicative of the presence of HIV-2 infection or co--infection of HIV-1 and HIV-2;

(6) an in vitro method (M4) for detecting antibodies in a sample of human body fluid which specifically bind to antigenic sites of an antigen, comprising contacting the antigen with antibodies from human body fluid for a time and under conditions sufficient to permit formation of an antigen-antibody complex between the antigen and the antibodies and detecting the formation of the antigen-antibody complex, where the antigen comprises a protein selected from P1; and

(7) an in vitro diagnostic kit for detecting the presence or absence of antibodies which bind to a protein of HIV-2, comprising one or more

proteins of HIV-2 selected from p90/80, p200, and gp300, and means for detecting the formation of immune complex between the proteins and the antibodies, where the proteins and the means are present in an amount sufficient to perform the detection.

ACTIVITY - Antiviral.

No biological data given.

MECHANISM OF ACTION - Vaccine.

No biological data given.

USE - The proteins and glycoproteins of are useful as a portion of a diagnostic composition for detecting HIV-2 infections. They are also useful for raising neutralizing antibodies that either inactivate the virus, reduce the viability of the virus in vivo, or inhibit or prevent viral replication. They are also useful in vaccine compositions against HIV-2.

Dwg.0/10

L9 ANSWER 2 OF 5 WPIDS (C) 2003 THOMSON DERWENT
AN 2001-256359 [26] WPIDS
CR 1990-039082 [06]; 1990-361260 [48]; 2000-338595 [29]; 2001-389285 [41]
DNC C2001-077148
TI Detecting human immunodeficiency virus type 2 (HIV-2) antigens comprises assaying for HIV-2(ROD) glycoproteins gp300, p200 and/or their fragments P90/80.
DC B04 D16
IN CRAWFORD, A G L; CUILLE, M R; HOVANESSIAN, A G; KRUST, B; MONTAGNIER, L
PA (INSP) INST PASTEUR
CYC 1
PI US 6197496 B1 20010306 (200126)* 20p
ADT US 6197496 B1 CIP of US 1988-204346 19880609, Div ex US 1989-356459 19890525, Cont of US 1991-804712 19911206, CIP of US 1993-2756 19930113, US 1994-321566 19941027
FDT US 6197496 B1 Div ex US 5208321, Cont of US 5312902, CIP of US 5470702
PRAI US 1994-321566 19941027; US 1988-204346 19880609; US 1989-356459 19890525; US 1991-804712 19911206; US 1993-2756 19930113

AB US 6197496 B UPAB: 20010724

NOVELTY - Method (I) for detecting human immunodeficiency virus type 2 (HIV-2) antigens in a composition comprises assaying the composition for gp300, p200 and/or p90/80 of HIV-2 (ROD).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method (II) for detecting HIV-2 antibodies in a biological fluid, comprising contacting the fluid with gp300, p200 and/or p90/80 of HIV-2(ROD) and detecting immune complex formation;

(2) detecting antibodies to an antigen selected from gp300, p200 and p90/80 of HIV-2(ROD) and gp300 of simian immunodeficiency virus SIV (MAC) in a human body fluid sample, comprising contacting the sample with the antigen and detecting immune complex formation;

(3) detecting infection of cells by HIV-2, comprising disrupting the cells to expose intracellular proteins and assaying the proteins for the presence of gp300, p200 and/or p90/80 of HIV-2(ROD);

(4) distinguishing HIV-2 infection from HIV-1 infection of cells, comprising assaying an extract comprising intracellular proteins of the cells for the presence of gp300, p200 and/or p90/80 of HIV-2(ROD) and/or gp300 of SIV(MAC) under non-denaturing conditions;

(5) a kit for detecting HIV-2 antibodies, comprising gp300, p200 and/or p90/80 of HIV-2(ROD) and at least one reagent for detecting immune complex formation; and

(6) a purified immune complex comprising a protein and an antibody that binds to the protein, where the protein is gp300, p200 or p90/80 of

HIV-2(ROD) or gp300 of SIV(MAC).
USE - The method is useful for diagnosing HIV-2 infection and distinguishing HIV-2 infection from HIV-1 infection.
Dwg.0/10

L9 ANSWER 3 OF 5 WPIDS (C) 2003 THOMSON DERWENT
AN 2000-338595 [29] WPIDS
CR 1990-039082 [06]; 1990-361260 [48]; 2001-256359 [20]; 2001-389285 [41]
DNC C2000-102695
TI Composition useful as an immunoassay reagent or immunogen comprises HIV-2 envelope proteins gp300, p200 and/or p90/80.
DC B04
IN CUILLE, M R; HOVANESSIAN, A G; KRUST, B; LAURENT-CRAWFORD, A G; MONTAGNIER, L
PA (INSP) INST PASTEUR & CENT NAT RECH SCIENTIFI
CYC 1
PI US 6056963 A 20000502 (200029)* 19p
ADT US 6056963 A CIP of US 1988-204346 19880609, Div ex US 1989-356459 19890525, Cont of US 1991-802712 19911206, CIP of US 1993-2756 19930113, Cont of US 1994-321566 19941027, US 1995-477596 19950607
FDT US 6056963 A Div ex US 5208321, Cont of US 5312902, CIP of US 5470702
PRAI US 1994-321566 19941027; US 1988-204346 19880609; US 1989-356459 19890525; US 1991-802712 19911206; US 1993-2756 19930113; US 1995-477596 19950607

AB US 6056963 A UPAB: 20010724
NOVELTY - A Composition comprising human immunodeficiency virus type 2 (HIV-2) envelope proteins gp300, p200 and/or p90/80, with molecular weights of about 300, 200 and 80-90 kD respectively (as determined by sodium dodecyl sulfate polyacrylamide gel electrophoresis), and a carrier, is new.
USE - The composition can be used as an immunoassay reagent for diagnostic detection of HIV-2 antibodies and as an immunogenic composition for producing antibodies or for inducing an immune response in vivo.
ADVANTAGE - The composition provides additional information on the structure and in vivo processing of HIV-2 proteins processing of HIV-2 envelope proteins and glycoproteins.
Dwg.0/10

L9 ANSWER 4 OF 5 WPIDS (C) 2003 THOMSON DERWENT
AN 1992-351526 [43] WPIDS
DNC C1992-155972
TI Complexes of the polynucleotide poly(A).poly(U) - for treating HIV infection and AIDS, and for increasing the efficacy of known anti-HIV drugs such as AZT.
DC B04
IN DE, PAILLETTE E D; HOVANESSIAN, A G; DESCHAMPS, DE PAILLETTE E; DE, PAILETTE E D; DESCHAMPS, E
PA (SCRC) SCRAS SOC CONSEILS RECH APPL S; (SCRC) SCRAS SOC CONSEILS RECH APPL SCI; (HOVA-I) HOVANESSIAN A G; (SCRC) SCRAS SOC CONSEILS RECH & APPL SCI; (SCRC) SOC CONSEILS RECH & APPL SCI
CYC 18
PI EP 509906 A1 19921021 (199243)* FR 9p
R: DE FR IT NL
GB 2255504 A 19921111 (199246) 12p
AU 9214909 A 19921022 (199250)
SE 9201207 A 19921017 (199250)
FR 2675384 A1 19921023 (199251) 11p
NO 9201513 A 19921019 (199251)
LU 88102 A 19921015 (199252) FR
CA 2066134 A 19921017 (199301)

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     ZA 9202699    A  19921230 (199307)
     DK 9200511    A  19921017 (199308)
     BE 1004857    A3 19930209 (199310)        16p
     JP 05262653   A  19931012 (199345)         6p
     CH 684521     A5 19941014 (199440)
     NZ 242264     A  19950224 (199513)#
     AU 656574     B  19950209 (199514)
     US 5736525    A  19980407 (199821)         5p
     US 5756477    A  19980526 (199828)
     SE 509801     C2 19990308 (199916)
     KR 233393     B1 19991201 (200111)
     CA 2066134    C  20021119 (200304)  EN
ADT  EP 509906 A1 EP 1992-401045 19920415; GB 2255504 A GB 1992-7798 19920409;
     AU 9214909 A AU 1992-14909 19920415; SE 9201207 A SE 1992-1207 19920415;
     FR 2675384 A1 FR 1992-4606 19920415; NO 9201513 A NO 1992-1513 19920415;
     LU 88102 A LU 1992-88102 19920416; CA 2066134 A CA 1992-2066134 19920415;
     ZA 9202699 A ZA 1992-2699 19920413; DK 9200511 A DK 1992-511 19920415; BE
     1004857 A3 BE 1992-348 19920415; JP 05262653 A JP 1992-95140 19920415; CH
     684521 A5 CH 1992-1177 19920410; NZ 242264 A NZ 1992-242264 19920413; AU
     656574 B AU 1992-14909 19920415; US 5736525 A Cont of US 1992-866435
     19920410, Cont of US 1993-99048 19930728, Cont of US 1994-218850 19940328,
     Cont of US 1995-437219 19950508, Div ex US 1996-582658 19960104, US
     1997-816643 19970313; US 5756477 A Cont of US 1992-866435 19920410, Cont
     of US 1993-99048 19930728, Cont of US 1994-218850 19940328, Cont of US
     1995-437219 19950508, US 1996-582658 19960104; SE 509801 C2 SE 1992-1207
     19920415; KR 233393 B1 KR 1992-6270 19920415; CA 2066134 C CA 1992-2066134
     19920415
FDT  AU 656574 B Previous Publ. AU 9214909
PRAI GB 1991-8085     19910416

AB   EP    509906 A UPAB: 19931115
     Compositions for the treatment of AIDS and the like contain an active
     ingredient which is 90-100% of the complex of polyadenylic acid with
     polyuridylic acid (Poly(A), Poly(U): I) optionally with another anti-AIDS
     agent (II) which acts on HIV virus by a different mechanism, together with
     pharmacologically-acceptable diluents and excipients.
          Compositions where the active component is (I) and 1-0.01% (II) are
     selected from 3'-azido-3'-deoxythymidine (AZT), dideoxyinosine (DDI) and
     dideoxycytidine (DDC). The compositions are given by IV injection in an
     aqueous medium. Each injection may contain 100-400mg, pref. 150-1000mg (I)
     and is repeated every 3-5 days.
     Dwg.0/0

L9   ANSWER 5 OF 5  WPIDS (C) 2003 THOMSON DERWENT
AN   1990-361260 [48]   WPIDS
CR   1990-039082 [06]; 2000-338595 [29]; 2001-256359 [20]; 2001-389285 [41]
DNC  C1990-156968
TI   HIV-2 trans membrane glycoprotein antigen Gp80 - used to detect HIV-2
     infection and to distinguish between HIV-1 and HIV-2.
DC   B04 D16
IN   HOVANESSIAN, A; KRUST, B; LAURENT, A; MONTAGNIER, L; REY, M;
     HOVANESSIAN, A G; LAURENT, A G; HOVANESSIA, A
PA   (INSP) INST PASTEUR
CYC  18
PI   WO 9013314    A  19901115 (199048)*
        RW: AT BE CH DE DK ES FR GB IT LU NL OA SE
         W: CA JP
     FR 2646854    A  19901116 (199102)
     EP 424519     A  19910502 (199118)
         R: AT BE CH DE ES FR GB LI LU NL SE
     JP 03506042   W  19911226 (199207)
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     US 5208321    A  19930504 (199319)       25p
     WO 9013314    A3 19901227 (199507)
     US 5470702    A  19951128 (199602)       24p
     EP 424519     B1 19960417 (199620)  FR   31p
         R: AT BE CH DE DK ES FR GB IT LI LU NL SE
     DE 69026569   E  19960523 (199626)
     ES 2085908    T3 19960616 (199631)
     SG 48125      A1 19980417 (199827)
     US 5807992    A  19980915 (199844)
     CA 2032505    C  20010710 (200142)  FR
     US 6261571    B1 20010717 (200142)
ADT  WO 9013314 A WO 1990-FR336 19900511; FR 2646854 A FR 1989-6322 19890512;
     EP 424519 A EP 1990-908240 19900511; JP 03506042 W JP 1990-507726
     19900511; US 5208321 A CIP of US 1988-204346 19880609, US 1989-356459
     19890525; WO 9013314 A3 WO 1990-FR336 19900511; US 5470702 A CIP of US
     1988-204346 19880609, Div ex US 1989-356459 19890525, US 1993-2756
     19930113; EP 424519 B1 EP 1990-908240 19900511, WO 1990-FR336 19900511; DE
     69026569 E DE 1990-626569 19900511, EP 1990-908240 19900511, WO 1990-FR336
     19900511; ES 2085908 T3 EP 1990-908240 19900511; SG 48125 A1 SG 1996-7178
     19900511; US 5807992 A CIP of US 1988-204346 19880609, Div ex US
     1989-356459 19890525, Cont of US 1993-2756 19930113, US 1995-466273
     19950606; CA 2032505 C CA 1990-2032505 19900511, WO 1990-FR336 19900511;
     US 6261571 B1 CIP of US 1988-204346 19880609, Div ex US 1989-356459
     19890525, Div ex US 1993-2756 19930113, US 1994-364829 19941227
FDT  US 5470702 A Div ex US 5208321; EP 424519 B1 Based on WO 9013314; DE
     69026569 E Based on EP 424519, Based on WO 9013314; ES 2085908 T3 Based on
     EP 424519; US 5807992 A Div ex US 5208321, Cont of US 5470702; CA 2032505
     C Based on WO 9013314; US 6261571 B1 Div ex US 5208321, Div ex US 5470702
PRAI US 1989-356459   19890525; FR 1989-6322     19890512; US 1988-204346
     19880609; US 1993-2756     19930113; US 1995-466273   19950606; US
     1994-364829   19941227

AB   WO   9013314 A UPAB: 20010726
     HIV-2 envelope transmembrand glycoprotein antigen, gp80, has the following
     properties: 1) a mol.wt. of 80 KD; 2) it is recognised by polyclonal
     antibodies directed against the gp300 glycoprotein; and 3) it is in
     dimeric form, each unit being a gp36 glycoprotein moiety encoded by a
     human HIV-2 retrovirus which can elicit lymphadenopathies (SLA) or AIDS.
     Also new are (a) glycoproteins of approximately the same mol.wt. capable
     of forming an immunological complexe (Antigne-antibody) with antibodies
     directed against gp80; and (b) antibodies recognising a part of gp300,
     gp140, gp125 and gp180. USE/ADVANTAGE - Useful in the compsn. for
     specifically diagnosing HIV-2 associated infections in vitro.  It is
     applied as a vaccine.  It is useful to distinguish HIV-2 infections from
     those of HIV-1. In an example monocolonal antibody 1H8 were used in a
     Western blot to identify viral proteins. In HIV-2 cellular infection, the
     antibody identified gp300, gp140 and gp80 but in the HIV-2 particles it
     identified principally the gp80 antigen and the lesser extent gp36 and
     gp300.  The presence of a small amt. of gp300 in the viral aggregates is
     probably due to contamination.  The weak signal with gp36 probably
     indicates a small level of this protein.  Monocolonal antibody 1H8 does
     not detect gp1235.  Therefore it is specific for precursor of HIV-2
     envelope protein (gp140 and gp300) and the transmembrane (gp36) protein.
     It's reactivity is localised to the glycoprotein transmembrane sequence of
     amino acids 579-604.
     Dwg.1/10

L13  ANSWER 12 OF 17  WPIDS (C) 2003 THOMSON DERWENT
AN   1993-227276 [28]   WPIDS
DNN  N1993-174419       DNC C1993-101235
TI   Monoclonal antibody against HIV-2
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gp36 antigen - used in immunoassays, for detecting HIV-2 antigens or antibodies.
DC B04 D16 S03
IN CHIN, J; EDISON, J C
PA (ABBO) ABBOTT LAB
CYC 23
PI WO 9313134 A1 19930708 (199328)* EN 43p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU CA JP KR
US 5256561 A 19931026 (199344) 15p
AU 9332768 A 19930728 (199347)
TW 213950 A 19931001 (199351)
EP 618930 A1 19941012 (199439) EN
R: BE CH DE ES FR GB IT LI
EP 618930 A4 19951115 (199626)
JP 2002503941 W 20020205 (200212) 39p
ADT WO 9313134 A1 WO 1992-US10731 19921204; US 5256561 A US 1991-811592 19911220; AU 9332768 A AU 1993-32768 19921204; TW 213950 A TW 1992-109460 19921125; EP 618930 A1 WO 1992-US10731 19921204, EP 1993-901478 19921204; EP 618930 A4 EP 1993-901478 ; JP 2002503941 W WO 1992-US10731 19921204, JP 1993-511706 19921204
FDT AU 9332768 A Based on WO 9313134; EP 618930 A1 Based on WO 9313134; JP 2002503941 W Based on WO 9313134
PRAI US 1991-811592 19911220

AB WO 9313134 A UPAB: 19931116
A monoclonal antibody (MAb) that specifically binds to HIV-2 gp. 36 antigen and does not bind to HIV-1 antigens is new.
Also claimed are: (1) a hybridoma cell line which secretes a MAb which specifically binds to HIV-2 gp. 36 antigen and does not specifically bind to HIV-1 antigens.
(2) a test kit to determine the presence of at least HIV-2 in a test sample, comprising a container contg. an aliquot of the MAb secreted by cell line ATCC HB10908.
The hybridoma producing the MAb was obtd. using the amino terminal 108 amino acids of the Rod isolate of HIV-2 gp. 41 as a fusion protein with CKS as immunogen.
USE/ADVANTAGE - The MAb is used for the specific detection if HIV-2 in test samples or tissues. It can also be used as a competitive probe for detection of anti-HIV-2 antibodies. The MAb can also be used for affinity purification of HIV-2 antigens and for the generation of chimeric antibodies for therapeutic use.
Dwg.0/5

L13 ANSWER 15 OF 17 WPIDS (C) 2003 THOMSON DERWENT
AN 1990-362851 [49] WPIDS
CR 1996-000754 [01]
DNN N1990-276882 DNC C1990-157638
TI Purified HIV-2 EHO proteins and glyco protein(s) - contain the envelope glyco protein of HIV-2 EHO and antibodies used in diagnosis.
DC B04 D16 S03
IN GUETARD, D; HOVANESSIAN, A; KRUST, B; LAURENT, A; MONTAGNIER, L; REY, M
PA (INSP) INST PASTEUR
CYC 13
PI EP 400245 A 19901205 (199049)* 20p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
EP 400245 B1 19951220 (199604) EN 25p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE

DE 68925202 E 19960201 (199610)
ES 2083388 T3 19960416 (199623)
ADT EP 400245 A EP 1990-401498 19900531; EP 400245 B1 EP 1989-401498 19890531; DE 68925202 E DE 1989-625202 19890531, EP 1989-401498 19890531; ES 2083388 T3 EP 1989-401498 19890531
FDT DE 68925202 E Based on EP 400245; ES 2083388 T3 Based on EP 400245
PRAI EP 1989-401498 19890531; EP 1990-401498 19900531

AB EP 400245 A UPAB: 19980126
A purified antigen (I) of the human HIV-2 EHO retrovirus or a part of the antigen or an antigen having the same immunological properties is claimed, having the envelope glycoprotein of HIV-2 EHO or a variant, providing (I) is recognised be human HIV-2 positive serum in an immunoprecipitation assay or western blot assay and is not recognised by antibodies directed against the gp300 of HIV-2 ROD in the same assays. Also claimed are polyclonal and monoclonal antibodies (PAs, MAs9 and kits for the in vitro diagnosis of infections due to a retrovirus of the HIV-2 EHO subtype alone or HIV-2 ROD or HIV-2 EHO together. A process for the prepn. of (I) is claimed, and for the in vitro diagnosis of an infection specifically due to HIV-2 EHO or due to HIV-2 ROD or HIV-2 EHO.
USE - At lesat one form of (I) is used for the in vitro diagnosis of an infection esp. due to human retrovirus of the HIV-2 EHO sibtype. The immunogenic compsn. is used as a vaccine at a dosage of 50 to 100 microg. per kg.
Dwg.1/6

L13 ANSWER 16 OF 17 WPIDS (C) 2003 THOMSON DERWENT
AN 1990-039082 [06] WPIDS
CR 1990-361260 [48]
TI New glycoprotein gp300 and protein p200 of HIV -2 - precursor for mature envelope glycoprotein and specific antibodies, useful for diagnosis and in vaccines.
DC B04 D16 S03
IN HOVANESSIAN, A; KRUST, B; LAURENT, A; MONTAGNIER, L; REY, M; HOVANESSIA, A; LAURENT, B; REY, M A
PA (INSP) INST PASTEUR; (CNRS) CNRS CENT NAT RECH SCI
CYC 17
PI FR 2632644 A 19891215 (199006)* 60p
EP 354072 A 19900207 (199006) FR
R: AT BE CH DE ES GB GR IT LI LU NL SE
PT 90800 A 19891229 (199006)
DK 8902843 A 19891210 (199010)
JP 02119791 A 19900507 (199024)#
US 5312902 A 19940517 (199419) 20p
EP 354072 B1 19950510 (199523) FR 33p
R: AT BE CH DE ES GB GR IT LI LU NL SE
DE 68922540 E 19950614 (199529)
ES 2074085 T3 19950901 (199541)
JP 3093763 B2 20001003 (200051) 18p
ADT FR 2632644 A FR 1988-807817 19880610; EP 354072 A EP 1989-401617 19890609; JP 02119791 A JP 1989-144316 19890608; US 5312902 A Cont of US 1988-204346 19880609, US 1991-802712 19911206; EP 354072 B1 EP 1989-401617 19890609; DE 68922540 E DE 1989-622540 19890609, EP 1989-401617 19890609; ES 2074085 T3 EP 1989-401617 19890609; JP 3093763 B2 JP 1989-144316 19890608
FDT DE 68922540 E Based on EP 354072; ES 2074085 T3 Based on EP 354072; JP 3093763 B2 Previous Publ. JP 02119791
PRAI FR 1988-7817 19880610; JP 1989-144316 19890608; US 1991-802712

19911206

AB FR 2632644 A UPAB: 20010724
The new antigenic protein gp 300 has mol. wt. about 300,000 and consists of 2 units of glycoprotein gp 140, which is a precursor particularly for the envelope glycoprotein gp 125 encoded by the env gene of HIV-2, or the protein of some other retrovirus which cross-reacts immunologically with an antibody directed against protein gp 300. Also new are (1) the protein p200, having the same skeleton as gp 300 but is not glycosylated and (2) monoclonal antibodies (MAb) reactive with gp 300 or p200 but not with the mature glycoproteins gp 125 or gp 36.

USE/ADVANTAGE - gp 300 and p 200 are useful (1) as reagents for diagnostic detection of HIV-2 antibodies and (2) as immuno-genic vaccine components. MAb can be used to detect viral antigens (esp. for early diagnosis since gp 300 is formed early in the virus development cycle); as a reagent for antigen purification, and also they interfere with viral development. gp 300 is (1) present in cells (esp. T4 lymphocytes and derived cell lines) of a patient infected withHIV-2; (2) has isoelectric point 6.8-7.8; (3) is N-glycosylated by oligo-saccharides; (4) is stable in presence of ionic or nonionic detergents, 4M urea, strong salts or reducing agents; and (5) decomposes spontaneously in vitro at pH4-5 into 2 moles gp 140 or, after isolation and purification, in acetate buffer of pH6 or less. It is not detected in a suspension of virus particle in culture medium. Ab pref. have neutralising activity, esp. they prevent binding of HIV-2 onto its specific receptor, partic. on T4 cells. They are made by usual cell-fusion techniques.
Dwg.0/10

L15 ANSWER 10 OF 14 MEDLINE
90112667 Document Number: 90112667. PubMed ID: 2296088. Transmembrane envelope glycoproteins of human immunodeficiency virus type 2 and simian immunodeficiency virus SIV-mac exist as homodimers. Rey M A; Laurent A G; McClure J; Krust B; Montagnier L; Hovanessian A G. (Unite d'Oncologie Virale (CNRS URA 1157), Institut Pasteur, Paris, France.) JOURNAL OF VIROLOGY, (1990 Feb) 64 (2) 922-6. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB An 80-kilodalton glycoprotein (gp80) was produced in human immunodeficiency virus type 2 (HIV-2)-infected cells along with three envelope glycoproteins that we have recently reported: the extracellular glycoprotein (gp125), the envelope glycoprotein precursor (gp140), and the transient dimeric form of the precursor (gp300). gp125 and gp80 were detectable after the synthesis of gp140 and the formation of gp300. Using a specific monoclonal antibody, we showed here that gp80 is a dimeric form of the transmembrane glycoprotein gp36 of HIV-2. Dimerization of the envelope glycoprotein precursor and dimeric forms of the transmembrane glycoproteins were also observed in cells infected with simian immunodeficiency virus (SIV -mac), a virus closely related to HIV-2. Under routine conditions of our experiments (i.e., extraction by 1% Triton X-100 before polyacrylamide gel electrophoresis in sodium dodecyl sulfate [SDS]), monomeric forms of the transmembrane glycoprotein of HIV -2 and SIV-mac were only seldomly observed. Dimeric forms of the envelope precursors and the transmembrane glycoproteins are probably stabilized by extraction in the nonionic detergent Triton X-100 since such dimeric forms resist dissociation during subsequent electrophoresis in the presence of the ionic detergent SDS. However, the dissociation of these dimeric forms might occur when samples are prepared by extraction directly in 1% SDS or by incubation of the purified dimers at acidic pH. Dimerization of the envelope precursor might be required for its processing to give the mature envelope proteins, whereas the transmembrane dimer might be essential for optimal structure of the virion and thus its infectivity.

L15 ANSWER 11 OF 14 MEDLINE
90051076 Document Number: 90051076. PubMed ID: 2683362. Characterization of an HIV-2-related virus with a smaller sized extracellular envelope glycoprotein. Rey M A; Krust B; Laurent A G; Guetard D; Montagnier L; Hovanessian A G. (Unite d'Oncologie Virale (URA CNRS 153), Institute Pasteur, Paris, France.) VIROLOGY, (1989 Nov) 173 (1) 258-67. Journal code: 0110674. ISSN: 0042-6822. Pub. country: United States. Language: English.

AB A new isolate of the human immunodeficiency virus (HIV) related to the HIV-2 strain was isolated from peripheral blood lymphocytes of an Ivory Coast patient with AIDS. This isolate referred to as HIV-2 EHO could be differentiated by its envelope precursor and external glycoprotein which are 20-kDa smaller than those of HIV-2 ROD isolate. Furthermore, the apparent molecular weight of the major core protein of HIV-2 EHO is 27 kDa instead of 26 kDa as in HIV-2 ROD isolate. In addition, the product of the vpx gene which is a characteristic feature of the HIV-2 strain, is 14 kDa in HIV-2 EHO compared with 16 kDa in HIV-2 ROD. In contrast to these, the envelope precursor of HIV-2 EHO forms a

transient dimer its maturation as is the case for HIV-2 ROD. In both cases the transmembrane proteins are 36 kDa and exists as homodimers of 80 kDa. Endoglycosidase H digestion experiments indicated that the 20-kDa difference between the two HIV-2 isolates is not due to a difference in the number of N-linked oligosaccharide chains per polypeptide, since deglycosylated envelope precursors of HIV-2 ROD and EHO have an apparent molecular weight of 80 and 60 kDa, respectively. Partial proteolysis of the envelope precursors from the two isolates with Staphylococcus aureus V8 protease gave a distinct pattern of polypeptides. These results suggest that the differences between the external envelope proteins of the two HIV-2 isolates are due to their amino acid composition. Accordingly, polyclonal antibodies raised against HIV-2 ROD envelope do not recognize the corresponding envelope proteins of HIV-2 EHO by immunoblotting and immunoprecipitation assays. These data illustrate that analysis of viral proteins could be useful for a rapid characterization of new viral isolates and show the heterogeneity of HIV-2 isolates in West Africa.

L15 ANSWER 12 OF 14 MEDLINE
89332167 Document Number: 89332167. PubMed ID: 2756243. On the processing of HIV-2 envelope glycoproteins. Rey M A; Hovanessian A G. (Unite d'Oncologie Virale (URA CNRS 153), Institut Pasteur, Paris.) RESEARCH IN VIROLOGY, (1989 May-Jun) 140 (3) 271-4. Journal code: 8907469. ISSN: 0923-2516. Pub. country: France. Language: English.

L15 ANSWER 13 OF 14 MEDLINE
89094991 Document Number: 89094991. PubMed ID: 2911118. Characterization of human immunodeficiency virus type 2 envelope glycoproteins: dimerization of the glycoprotein precursor during processing. Rey M A; Krust B; Laurent A G; Montagnier L; Hovanessian A G. (Unite d'Oncologie Virale (Unite Associee CNRS 1157), Institut Pasteur, Paris, France.) JOURNAL OF VIROLOGY, (1989 Feb) 63 (2) 647-58. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB Four glycoproteins with apparent molecular weights of 300,000, 140,000, 125,000, and 36,000 (gp300, gp140, gp125, and gp36) were detectable in human immunodeficiency virus type 2 (HIV-2)-infected cells. gp125 and gp36 are the external and transmembrane components, respectively, of the envelope glycoproteins of HIV-2 mature virions. gp300 and gp140 are only detectable in virus-infected cells. They have identical isoelectric points, suggesting that gp300 might be a dimeric form of the immature precursor, gp140. The purified gp300 can be dissociated in a slightly acidic buffer to give rise to monomers of 140,000 molecular weight. Such dissociated monomers and the purified gp140 showed identical patterns of polypeptides after partial proteolysis with Staphylococcus aureus V8 protease. Pulse-chase experiments indicated that gp300 is formed after synthesis of gp140 and before the detection of the mature external envelope glycoprotein, gp125. These results were confirmed by using various inhibitors of glycosylation and inhibitors of trimming enzymes. Dimer formation of the envelope glycoprotein precursor was also observed in cells infected with simian immunodeficiency virus (SIV), a virus closely related to HIV-2. On the other hand, the envelope glycoprotein precursor of HIV-1 did not form a dimer during its processing. Therefore, dimer formation seems to be a specific property of HIV-2 and SIV envelope gene expression. Such transient dimerization of the

glycoprotein precursor might be required for its efficient transport to the Golgi apparatus and for its processing.

L18 ANSWER 8 OF 8 MEDLINE
87114318 Document Number: 87114318. PubMed ID: 2879971.
Lymphadenopathy-associated virus type 2 in AIDS and AIDS-related complex. Clinical and virological features in four patients. Brun-Vezinet F; Rey M A; Katlama C; Girard P M; Roulot D; Yeni P; Lenoble L; Clavel F; Alizon M; Gadelle S; +. LANCET, (1987 Jan 17) 1 (8525) 128-32. Journal code: 2985213R. ISSN: 0140-6736. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Lymphadenopathy-associated virus type 2 (HIV 2) was isolated from 3 patients with AIDS and 1 with AIDS-related complex. Clinical features were similar to those in patients infected with HIV 1. Viral isolates were characterised by hybridisation with HIV 1 and HIV 2 DNA probes. HIV 1 and HIV 2 serological studies were performed by enzyme-linked immunosorbent assay (ELISA), western blot, and radioimmunoprecipitation assay. HIV 2 IgG antibodies were detected in all sera. The molecular weights of the most representative HIV 2 proteins were determined by immunoblot. Cross-reactivity was restricted to HIV 1 and HIV 2 core proteins. In all 4 patients the neurotropism of HIV 2 was demonstrated by virus isolation from the cerebrospinal fluid and/or by evidence of intrathecal HIV 2 IgG synthesis. All sera were antibody negative by HIV 1 ELISA. An assay specific for HIV 2 is needed for screening of blood donations and for diagnosis and seroepidemiological study of HIV 2 infection.

L24 ANSWER 66 OF 82 MEDLINE
87201725 Document Number: 87201725. PubMed ID: 3472076. Human immunodeficiency virus type 2 infection associated with AIDS in West Africa. Clavel F; Mansinho K; Chamaret S; Guetard D; Favier V; Nina J; Santos-Ferreira M O; Champalimaud J L; Montagnier L. NEW ENGLAND JOURNAL OF MEDICINE, (1987 May 7) 316 (19) 1180-5. Journal code: 0255562. ISSN: 0028-4793. Report No.: PIP-055284; POP-00190189. Pub. country: United States. Language: English.

AB We recently reported the isolation of a new retrovirus, termed human immunodeficiency virus type 2 (HIV-2), from two West African patients with the acquired immunodeficiency syndrome (AIDS). This virus is related to but distinct from the well-characterized AIDS retrovirus, human immunodeficiency virus type 1 (HIV-1). We report here evidence of infection with HIV-2 in 30 patients, almost all from West Africa. Seventeen of them had a clinical syndrome indistinguishable from AIDS (7 of these 17 died). Others had either the AIDS-related complex or no HIV-related symptoms. All patients had serum antibodies reacting with HIV-2 in an indirect immunofluorescence assay. All serum tested contained antibodies reacting with the envelope glycoprotein of the virus in an immunoprecipitation assay. Cross-reactivity of serum antibodies with HIV-1 was detected in a minority of patients and varied according to the assay used. Retroviral isolates were obtained from the blood lymphocytes of 11 patients and were all identified as HIV-2 by nucleic acid hybridization; none hybridized with an HIV-1 probe. These findings indicate that some cases of AIDS in West Africa may be caused by HIV-2, but the extent of the spread of this virus and its clinical correlates will require careful epidemiologic

investigation.

L26 ANSWER 4 OF 17 MEDLINE
89078628 Document Number: 89078628. PubMed ID: 2462515. Predictions of linear T-cell and B-cell epitopes in proteins encoded by HIV-1, HIV-2 and SIVMAC and the conservation of these sites between strains. Zvelebil M J; Sternberg M J; Cookson J; Coates A R. (Department of Crystallography, Birkbeck College, London, England.) FEBS LETTERS, (1988 Dec 19) 242 (1) 9-21. Journal code: 0155157. ISSN: 0014-5793. Pub. country: Netherlands. Language: English.

AB An important consideration in the design of vaccines to prevent HIV-1 infection effective against different strains is the amino acid sequence conservation of antigenic determinants. Even one amino acid change can destroy the antigenicity of a site for the antibody or T-cell receptor. The comparisons of predicted T- and B-cell epitopes between human HIV-1, HIV-2 and monkey SIVMAC AIDS viruses are presented. The three major gene products (env, gag and pol) were examined. A number of epitopes were identical between strains of HIV-1. Our analysis highlights the problem of designing an effective HIV-1 and HIV-2 vaccine and also the problem of testing human vaccines in monkey models.

L26 ANSWER 6 OF 17 MEDLINE
89037357 Document Number: 89037357. PubMed ID: 2846880. Characterization of infectious molecular clones of simian immunodeficiency virus (SIVmac) and human immunodeficiency virus type 2: persistent infection of rhesus monkeys with molecularly cloned SIVmac. Naidu Y M; Kestler H W 3rd; Li Y; Butler C V; Silva D P; Schmidt D K; Troup C D; Sehgal P K; Sonigo P; Daniel M D; +. (New England Regional Primate Research Center, Harvard Medical School, Southborough, Massachusetts 01772.) JOURNAL OF VIROLOGY, (1988 Dec) 62 (12) 4691-6. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB Infection of macaque monkeys with simian immunodeficiency virus (SIV) is probably the best animal model currently available for studying acquired immunodeficiency syndrome. In this report, we describe three infectious molecular clones of SIVmac and one of human immunodeficiency virus type 2 (HIV-2) and their use in the study of cell and species specificity, animal infection, and the relationship of gene sequence to function. Replication of the cloned viruses in different cell lines varied dramatically. Some human CD4+ cell lines (HUT 78 and MT-4) supported the replication of SIVmac and HIV-2, while others (CEM and Jurkat-T) supported the replication of HIV-2 but not SIVmac. Growth of cloned virus in macaque lymphocytes in vitro was predictive of macaque infection in vivo. Macaque lymphocytes supported the replication of SIVmac239 and SIVmac251 but not SIVmac142 or HIV-2ROD. Using virus recovery and antibody response as criteria for infection, macaques that received cloned SIVmac251 and SIVmac239 became infected, while macaques receiving cloned SIVmac142 and HIV-2ROD did not become infected. Nucleotide sequences from the envelope region of all four cloned viruses demonstrated that there is considerable flexibility in the location of the translational termination (stop) signal. These infectious molecular clones will be very useful for future studies directed at the molecular basis for persistence, pathogenicity, tropism, and cell and species specificity.

L26 ANSWER 8 OF 17 MEDLINE

89013518 Document Number: 89013518. PubMed ID: 2902381. Envelope cross-reactivity in Western blot for HIV-1 and HIV-2 may not indicate dual infection. Tedder R S; O'Connor T; Hughes A; N'jie H; Corrah T; Whittle H. (Department of Medical Microbiology, University College and Middlesex School of Medicine, London.) LANCET, (1988 Oct 22) 2 (8617) 927-30. Journal code: 2985213R. ISSN: 0140-6736. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Serological identification of infection with human immunodeficiency virus types 1 and 2 (HIV-1 and HIV-2) by western blot alone may not be sufficient to diagnose dual infection. Extensive cross-reactions (eg, to envelope glycoprotein antibody) are seen on heterologous western blots. The use of other techniques, in this case competitive enzyme-linked immunosorbent assays, indicates that blot patterns previously thought to demonstrate simultaneous dual infections should be interpreted with caution.

L31 ANSWER 4 OF 27 MEDLINE
88192932 Document Number: 88192932. PubMed ID: 3482159. Anti HIV -2 serological screening in Portuguese populations native from or having had close contact with Africa. Saal F; Sidibe S; Alves-Cardoso E; Terrinha A; Gessain A; Poirot Y; Montagnier L; Peries J. (Laboratoire de Virologie des Leucemies, L.O.I. CNRS, Hopital Saint-Louis, Paris, France.) AIDS RESEARCH AND HUMAN RETROVIRUSES, (1987) 3 (4) 341-2. Journal code: 8709376. ISSN: 0889-2229. Report No.: PIP-054814; POP-00192680. Pub. country: United States. Language: English.

AB To gather epidemiologic information on the spread of human immunodeficiency virus (HIV)-2 in Portugal, sera were collected in 1985 from 156 healthy adults currently living in Portugal but natives of Guinea Bissau, Cape Verde Islands, Saint Tome/Prince, Angola, and Mozambique and from 321 native Portuguese men and women who had close contact with local African populations. As a control, sera were collected from 102 health Portuguese with no previous contact with Africa or African natives. The enzyme-linked immunosorbent assay (ELISA) developed by Diagnostic Pasteur was used to screen for antibodies to HIV. No positive reactions were recorded in the control population. In contracts, 9 (6%) of the African natives and 7 (2%) of the contacts of Africans were HIV-positive, 6 of the positive sera were from women and 10 were from men. Significantly, 1 of the HIV-2-positive serum samples was from a native of Mozambique and 3 were from natives of Angola. This suggests that HIV-2 infection may have spread to other former Portuguese colonies, and foreign army soldiers who were at 1 time residents of Mozambique or Angola should be considered a risk group capable of spreading HIV-2 infection to other countries.

L35 ANSWER 2 OF 2 MEDLINE
86283909 Document Number: 86283909. PubMed ID: 2874433. Antibodies to simian immunodeficiency virus in African green monkeys in Africa in 1957-62. Hendry R M; Wells M A; Phelan M A; Schneider A L; Epstein J S; Quinnan G V. LANCET, (1986 Aug 23) 2 (8504) 455. Journal code: 2985213R. ISSN: 0140-6736. Pub. country: ENGLAND: United Kingdom. Language: English.

L36 ANSWER 7 OF 8 MEDLINE
87210510 Document Number: 87210510. PubMed ID: 3472469. Immunohistochemical localization of human and simian immunodeficiency viral antigens in fixed tissue sections. Ward J M; O'Leary T J; Baskin G

B; Benveniste R; Harris C A; Nara P L; Rhodes R H. AMERICAN JOURNAL OF PATHOLOGY, (1987 May) 127 (2) 199-205. Journal code: 0370502. ISSN: 0002-9440. Pub. country: United States. Language: English.

AB Antigens of human (HIV) or simian immunodeficiency viruses (SIV) were identified with polyclonal or monoclonal antibodies and avidin-biotin complex (ABC) immunohistochemistry in fixed surgical pathology and autopsy specimens of humans or monkeys with the acquired immunodeficiency syndrome. With B-5 fixative, viral antigens were readily detected in lymph nodes of 8 of 13 patients with follicular hyperplasia, but in only 1 of 12 patients with follicular atrophy. Antigen was detected in follicular dendritic reticular cells and rare blastlike cells, extracellularly, and in postcapillary venules, medullary lymphocytes, sinus histiocytes, and macrophages in some lymph nodes. In the brain at autopsy, antigen could be found in gliomesenchymal-cell nodules, astrocytes, vascular endothelial cells, multinucleated cells, and astrocytes and macrophages associated with demyelination. In contrast, 4 rhesus monkeys with experimental SIV infection had abundant antigen in sinus histiocytes, macrophages, and multinucleated giant cells of lymph nodes and spleen and in thymic epithelial cells. Brain lesions of monkeys resembled those of humans, with antigen found in macrophages and multinucleated giant cells. Antibodies to HIV also were immunoreactive in formalin-fixed tissue sections of monkeys containing SIV antigens. The ABC technique provided a fast and efficient method for localizing HIV and SIV antigens in fixed surgical and autopsy specimens. These findings are consistent with those found with in situ hybridization, ultrastructural studies, frozen sections of lymph nodes, and permanent sections of brain.

L36 ANSWER 2 OF 8 MEDLINE
88089521 Document Number: 88089521. PubMed ID: 2826656. Long-term persistent infection of macaque monkeys with the simian immunodeficiency virus. Daniel M D; Letvin N L; Sehgal P K; Hunsmann G; Schmidt D K; King N W; Desrosiers R C. (New England Regional Primate Research Center, Harvard Medical School, Southborough, Massachusetts 01772.) JOURNAL OF GENERAL VIROLOGY, (1987 Dec) 68 (Pt 12) 3183-9. Journal code: 0077340. ISSN: 0022-1317. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Juvenile rhesus macaques 6 to 18 months of age were experimentally infected by intravenous inoculation with the simian immunodeficiency virus (SIV), the T cell-tropic retrovirus of monkeys related to the human acquired immunodeficiency syndrome (AIDS) virus HIV. The SIV used for inoculation was grown either in normal human peripheral blood lymphocytes in the presence of interleukin 2 or in the human tumour cell line HUT-78. Eight of the macaques died 129 to 352 days post-inoculation with a variety of clinical and pathological findings paralleling those of AIDS in humans. However eight other animals became persistently infected for prolonged periods; these eight macaques remained alive at 537 and 820 days post-inoculation despite persistent lymphadenopathy and our continued ability to isolate SIV. The ability of these monkeys to survive infection correlated directly with the strength of their antibody response to SIV. Infection was also established in macaques using approximately 100 tissue culture infectious doses of HUT-78-grown SIV. There was no correlation between the dose of virus inoculum and either the strength of the antibody response or clinical outcome. These results demonstrate that SIV infection of macaques can be used not only to study acute AIDS but also to mimic the long-term persistent infection seen in carriers of HIV.

L36 ANSWER 3 OF 8 MEDLINE
88039118 Document Number: 88039118. PubMed ID: 2823148. Relation of HTLV-4 to simian and human immunodeficiency-associated viruses. Hahn B H; Kong L I; Lee S W; Kumar P; Taylor M E; Arya S K; Shaw G M. (Department of Internal Medicine, University of Alabama, Birmingham 35294.) NATURE, (1987 Nov 12-18) 330 (6144) 184-6. Journal code: 0410462. ISSN: 0028-0836. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Human immunodeficiency virus type 1 (HIV-1) is the aetiologic agent of AIDS (acquired immune deficiency syndrome) in most countries and probably originated in Central Africa like the AIDS epidemic itself. Evidence for a second major group of human immunodeficiency-associated retroviruses came from a report that West African human populations like wild-caught African green monkeys had serum antibodies that reacted more strongly with a simian immunodeficiency virus (STLV-3Mac) (ref.6) than with HIV-1. Novel T-lymphotropic retroviruses were reported to have been isolated from healthy Senegalese West Africans (HTLV-4) (ref. 4) and from African green monkeys (STLV-3AGM) (ref. 7), and a different retrovirus (HIV-2) was identified in other West African AIDS patients. Genomic analysis of HIV-2 clearly distinguished it from STLV-3 (ref. 9), but restriction enzyme site-mapping of three different HTLV-4 isolates and six different STLV-3AGM isolates showed them to be essentially indistinguishable. In this report we clone, restriction map, and partially sequence three isolates of HTLV-4 (PK82, PK289, PK190) (ref. 4). We find that these viruses differ in nucleotide sequence from each other and from three isolates of STLV-3AGM (K78, K6W, K1) (ref. 7) by 1% or less. We also report the isolation of a T-lymphotropic retrovirus from the peripheral blood of a healthy Senegalese woman which hybridizes preferentially to HIV-2 specific DNA probes. We conclude that HTLV-4 (ref. 4) and STLV-3AGM (ref. 7) are not independent virus isolates and that HIV-2 is present in Senegal as it is in other West African countries.

L37 ANSWER 27 OF 29 MEDLINE
85218785 Document Number: 85218785. PubMed ID: 3159089. Isolation of T-cell tropic HTLV-III-like retrovirus from macaques. Daniel M D; Letvin N L; King N W; Kannagi M; Sehgal P K; Hunt R D; Kanki P J; Essex M; Desrosiers R C. SCIENCE, (1985 Jun 7) 228 (4704) 1201-4. Journal code: 0404511. ISSN: 0036-8075. Pub. country: United States. Language: English.

AB The isolation of a T-cell tropic retrovirus from three immunodeficient macaques and one macaque with lymphoma is described. The morphology, growth characteristics, and antigenic properties of this virus indicate that it is related to the causative agent of acquired immune deficiency syndrome in humans (HTLV-III or LAV). This virus is referred to as simian T-lymphotropic virus type III (STLV-III) of macaques. The existence of a cytopathic, T-cell tropic virus resembling HTLV-III in monkeys may facilitate study of disease induction and vaccine development in an animal model.

L37 ANSWER 28 OF 29 MEDLINE
85218784 Document Number: 85218784. PubMed ID: 3873705. Serologic identification and characterization of a macaque T-lymphotropic retrovirus closely related to HTLV-III. Kanki P J; McLane M F; King N W Jr; Letvin N L; Hunt R D; Sehgal P; Daniel M D; Desrosiers R C; Essex M. SCIENCE, (1985 Jun 7) 228 (4704) 1199-201. Journal code: 0404511. ISSN: 0036-8075. Pub. country: United States. Language: English.

AB Human T-lymphotropic virus type III (HTLV-III) is thought to play an etiologic role in the development of the acquired immune deficiency syndrome (AIDS). In this study the serologic characterization of a new simian retrovirus that is related to HTLV-III is described. This new

virus, here referred to as STLV-III, was isolated from sick macaques at the New England Regional Primate Research Center. Radioimmunoprecipitation analysis revealed STLV-III -specific proteins of 160, 120, 55, and 24 kilodaltons, all similar in size to the major gag and env proteins of HTLV-III. These antigens were recognized by representative macaque serum samples and human reference serum samples positive for HTLV-III antibodies. Monoclonal antibodies directed to p24, the major core protein of HTLV-III, also immunoprecipitated a 24-kilodalton species in lysates of cells infected with the macaque virus. This HTLV-III-related virus, which naturally infects a nonhuman primate species, may provide a useful model for the study of HTLV-III and the pathogenesis of AIDS.

L37 ANSWER 29 OF 29 MEDLINE
85212803 Document Number: 85212803. PubMed ID: 2860515. Antibodies to simian T-lymphotropic retrovirus type III in African green monkeys and recognition of STLV-III viral proteins by AIDS and related sera. Kanki P J; Kurth R; Becker W; Dreesman G; McLane M F; Essex M. LANCET, (1985 Jun 8) 1 (8441) 1330-2. Journal code: 2985213R. ISSN: 0140-6736. Pub. country: ENGLAND: United Kingdom. Language: English.

L37 ANSWER 25 OF 29 MEDLINE
85300530 Document Number: 85300530. PubMed ID: 2412295. Induction of AIDS-like disease in macaque monkeys with T-cell tropic retrovirus STLV-III. Letvin N L; Daniel M D; Sehgal P K; Desrosiers R C; Hunt R D; Waldron L M; MacKey J J; Schmidt D K; Chalifoux L V; King N W. SCIENCE, (1985 Oct 4) 230 (4721) 71-3. Journal code: 0404511. ISSN: 0036-8075. Pub. country: United States. Language: English.

AB The T-cell tropic retrovirus of macaque monkeys STLV-III has morphologic, growth, and antigenic properties indicating that it is related to HTLV-III/LAV, the etiologic agent of the acquired immune deficiency syndrome (AIDS) in humans. Four of six rhesus monkeys died within 160 days of STLV-III inoculation with a wasting syndrome, opportunistic infections, a primary retroviral encephalitis, and immunologic abnormalities including a decrease in T4+ peripheral blood lymphocytes. These data show that an immunodeficiency syndrome can be produced experimentally in a nonhuman primate by an agent from the HTLV-III/LAV group of retroviruses. The STLV-III -macaque system will thus provide a useful model for the study of antiviral agents and vaccine development for human AIDS.

L37 ANSWER 23 OF 29 MEDLINE
86023882 Document Number: 86023882. PubMed ID: 2996402. Antigens of human T-lymphotropic virus type III/lymphadenopathy-associated virus. Essex M; Allan J; Kanki P; McLane M F; Malone G; Kitchen L; Lee T H. ANNALS OF INTERNAL MEDICINE, (1985 Nov) 103 (5) 700-3. Ref: 32. Journal code: 0372351. ISSN: 0003-4819.
Report No.: PIP-036523; POP-00157501. Pub. country: United States. Language: English.

AB Antigens encoded by the gag and env genes of the human T-lymphotropic virus type III/lymphadenopathy associated virus (HTLV-III/LAV) include a p55 gag polyprotein that yields p24 as the major virus core protein, and an env gene polyprotein, gp 160, that produces gp 120, the most immunogenic protein in humans, at the amino terminus. Although its use is limited to research laboratories due to the cost and specialized procedures involved, the analysis of sera by radioimmunoprecipitation and sodium dodecyl sulfate-polyacrylamide gel electrophoresis is the test providing the optimal balance of specificity and sensitivity. Because the gp 120 represents the external virus protein, it would be the most

appropriate antigen for vaccine development. Also viruses serologically related to HTLV-III/LAV were detected recently in two species of Old World monkeys. Because about half the healthy African green monkeys appear to have been exposed to simian T-lymphotropic virus type III (STLV-III), a related agent of the species, a characterization of the STLV-III gp 120 and immune response of the host may provide additional information for vaccine development.

L37 ANSWER 20 OF 29 MEDLINE
86230867 Document Number: 86230867. PubMed ID: 3012358. Isolation of an HTLV-III-related retrovirus from macaques with simian AIDS and its possible origin in asymptomatic mangabeys. Murphey-Corb M; Martin L N; Rangan S R; Baskin G B; Gormus B J; Wolf R H; Andes W A; West M; Montelaro R C. NATURE, (1986 May 22-28) 321 (6068) 435-7. Journal code: 0410462. ISSN: 0028-0836. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Acquired immune deficiency syndrome (AIDS) has become a worldwide epidemic, so the development of vaccines and antiviral agents effective against the causative agent, human T-lymphotropic virus type III (HTLV-III), is vital. This work would be greatly simplified if a suitable animal model could be developed. Here we report the isolation of an HTLV-III-related retrovirus, STLV-III/Delta, from rhesus macaques (Macaca mulatta) with transmissible simian AIDS (SAIDS) and from asymptomatic sooty mangabeys (Cercocebus atys). SAIDS was initially diagnosed in several macaques previously inoculated with tissue homogenates of mangabey origin. Western blot analysis of both the mangabey and macaque sera demonstrated the presence of antibody cross-reactive primarily with the HTLV-III proteins p24 and p61. In a related experiment, analysis of these same sera revealed simian antibody to STLV-III/Delta proteins similar, but not identical, to those of HTLV-III with estimated relative molecular masses (Mrs) of 16,000 (16K), 26K, 35K, 45K, 60K and 110K. Infection of the mangabey, an African primate, with an HTLV-III-related virus may provide a clue to the origin of HTLV-III in humans. The apparent difference in susceptibility to SAIDS-like disease between infected macaques and mangabeys suggests that these species may respond differently to STLV-III infection.

L40 ANSWER 1 OF 1 MEDLINE
87090385 Document Number: 87090385. PubMed ID: 3025743. Molecular cloning and polymorphism of the human immune deficiency virus type 2. Clavel F; Guyader M; Guetard D; Salle M; Montagnier L; Alizon M. NATURE, (1986 Dec 18-31) 324 (6098) 691-5. Journal code: 0410462. ISSN: 0028-0836. Pub. country: ENGLAND: United Kingdom. Language: English.

AB We recently reported the isolation of a novel retrovirus, the human immune deficiency virus type 2 (HIV-2, previously named LAV-2), from patients with acquired immune deficiency syndrome (AIDS) originating from West Africa. This virus is related to HIV-1, the causative agent of the AIDS epidemic now spreading in Central and East Africa, as well as the USA and Europe (see ref. 3 for review) both by its morphology and by its tropism and in vitro cytopathic effect on CD4 (T4) positive cell lines and lymphocytes. But preliminary hybridization experiments indicated that there are substantiated differences between the sequences of the two genomes. Furthermore, the proteins of HIV-1 and HIV-2 have different sizes and their serological cross-reactivity is restricted to the major core protein, as the envelope glycoproteins of HIV-2 are not immunoprecipitated by HIV-1-positive sera. We now report the molecular cloning of the complete 9.5-kilobase (kb) genome of HIV-2, the observation of restriction site polymorphism between different isolates, and a

preliminary analysis of the relationship of HIV-2 with other human and simian retroviruses.

L41 ANSWER 8 OF 8 MEDLINE
87114318 Document Number: 87114318. PubMed ID: 2879971. Lymphadenopathy-associated virus type 2 in AIDS and AIDS-related complex. Clinical and virological features in four patients. Brun-Vezinet F; Rey M A; Katlama C; Girard P M; Roulot D; Yeni P; Lenoble L; Clavel F; Alizon M; Gadelle S; +. LANCET, (1987 Jan 17) 1 (8525) 128-32. Journal code: 2985213R. ISSN: 0140-6736. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Lymphadenopathy-associated virus type 2 (HIV 2) was isolated from 3 patients with AIDS and 1 with AIDS-related complex. Clinical features were similar to those in patients infected with HIV 1. Viral isolates were characterised by hybridisation with HIV 1 and HIV 2 DNA probes. HIV 1 and HIV 2 serological studies were performed by enzyme-linked immunosorbent assay (ELISA), western blot, and radioimmunoprecipitation assay. HIV 2 IgG antibodies were detected in all sera. The molecular weights of the most representative HIV 2 proteins were determined by immunoblot. Cross-reactivity was restricted to HIV 1 and HIV 2 core proteins. In all 4 patients the neurotropism of HIV 2 was demonstrated by virus isolation from the cerebrospinal fluid and/or by evidence of intrathecal HIV 2 IgG synthesis. All sera were antibody negative by HIV 1 ELISA. An assay specific for HIV 2 is needed for screening of blood donations and for diagnosis and seroepidemiological study of HIV 2 infection.

L45 ANSWER 79 OF 80 MEDLINE
83137669 Document Number: 83137669. PubMed ID: 6827248. Lymphocytic choriomeningitis virus. III. Structural proteins of the virion. Bruns M; Martinez Peralta L; Lehmann-Grube F. JOURNAL OF GENERAL VIROLOGY, (1983 Mar) 64 Pt 3 599-611. Journal code: 0077340. ISSN: 0022-1317. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Analysis of radioactively labelled and highly purified infectious lymphocytic choriomeningitis (LCM) virus by polyacrylamide gel electrophoresis (PAGE) revealed 12 components which, according to their apparent molecular weight and glycosylation status, were designated as p19, p25, p26, gp35, p38, gp44, gp60, p63, p77, gp85, gp130, and p200. As shown by immunoprecipitation, they all bound to rabbit anti-LCM virus antibodies. Three proteins, namely gp35 (= 'GP-2'), gp44 (= 'GP-1') and p63 (= 'NP'), had previously been described by others as major constituents of the virion. Our results confirm this and suggest that gp60, p77, gp85, and p200 are further distinct structural proteins. In contrast, p25 and p38 appear to be cleavage or degradation products of p63; p19 and p26 seem to belong to gp60, which could be the monomeric form of a dimer, gp130. Peptide mapping by limited proteolysis revealed considerable overlapping of amino acid sequences among the major glycoproteins with one peptide being common to all. From the results of PAGE performed after external labelling of intact virions, we conclude that gp44, gp60, and gp85 (but not gp35) form the surface of the virus envelope. Analytical isoelectric focusing under non-reducing conditions has shown that the major glycoproteins appeared to consist of several components with different isoelectric points.

L45 ANSWER 77 OF 80 MEDLINE
85133532 Document Number: 85133532. PubMed ID: 3838336. Purification and

characterization of the respiratory syncytial virus fusion protein. Walsh E E; Brandriss M W; Schlesinger J J. JOURNAL OF GENERAL VIROLOGY, (1985 Mar) 66 (Pt 3) 409-15. Journal code: 0077340. ISSN: 0022-1317. Pub. country: ENGLAND: United Kingdom. Language: English.

AB The fusion protein of respiratory syncytial virus was purified by affinity chromatography using a monoclonal antibody. Under various conditions the protein was recovered as a 145K dimer or a 70K monomer. The 70K monomer was composed of disulphide-linked fragments of 48K and 23K. Polyclonal rabbit serum produced to the dimerized fusion protein neutralized virus but did not inhibit fusion, while rabbit serum to the 2-mercaptoethanol-treated dimerized protein neutralized virus and inhibited fusion of infected cells. Only the latter serum strongly recognized the 23K fragment when studied by Western blot analysis.

L45 ANSWER 75 OF 80 MEDLINE
89008743 Document Number: 89008743. PubMed ID: 2844838. Effect of detergents on the structure of integral membrane proteins of Sendai virus studied with size-exclusion high-performance liquid chromatography and monoclonal antibodies. Welling-Wester S; Kazemier B; Orvell C; Welling G W. (Department of Medical Microbiology, Rijksuniversiteit Groningen, The Netherlands.) JOURNAL OF CHROMATOGRAPHY, (1988 Jun 29) 443 255-66. Journal code: 0427043. ISSN: 0021-9673. Pub. country: Netherlands. Language: English.

AB The integral membrane proteins of Sendai virus, the fusion protein F (Mr = 65,000) and the haemagglutinin-neuraminidase protein HN (Mr = 68,000), were used as a model protein mixture. They were subjected to size-exclusion high-performance liquid chromatography on Superose 6HR columns with eluents containing various additives in order to solubilize the proteins. The effect of the additives on the structure of the membrane proteins was investigated with conformation-dependent monoclonal antibodies, either directed against F or HN protein, and by determination of the haemagglutinating capacity of the HN protein. The results show that the structure of the HN protein is more easily disturbed by eluents than that of the F protein. When the elution conditions are mild, e.g., 0.1% octylglucoside, the structure of both proteins is conserved but no separation is obtained. Elution with a buffer containing 0.05% sarkosyl (dodecyl methylglycine sodium salt) did not affect the structure and resulted in pure F protein. Pretreatment of the Amberlite XAD-2-treated Sendai virus envelope extract with 4% sodium dodecyl sulphate (SDS) and elution with 0.1% SDS in 50 mM sodium phosphate (pH 6.5) altered the structure of the HN protein but resulted in purification of the tetramer and the dimer of the HN protein, and the monomer of the F protein.

L45 ANSWER 74 OF 80 MEDLINE
89073739 Document Number: 89073739. PubMed ID: 2849232. Chemical crosslinking of glycoproteins on the envelope of herpes simplex virus. Zhu Q; Courtney R J. (Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center, Shreveport 71130.) VIROLOGY, (1988 Dec) 167 (2) 377-84. Journal code: 0110674. ISSN: 0042-6822. Pub. country: United States. Language: English.

AB A base-reversible, 13-A homo-bifunctional chemical crosslinking reagent, bis[2-(succinimidooxycarbonyloxy)ethyl]sulfone (BSOCOES), was tested for its ability to crosslink the herpes simplex virus type 1 glycoproteins associated with the envelope of purified virions. The crosslinked proteins were fractionated and analyzed by immunoblotting, immunoprecipitation, and two-dimensional polyacrylamide gel

electrophoresis using monospecific antisera to detect the glycoproteins, gB and gC. Each of the glycoproteins exhibited distinct patterns of crosslinking. Monomers of gB were crosslinked and appeared as a high-molecular-weight complex. No apparent intermediates were observed between the gB monomer and the high-molecular-weight complex. Analysis of the components in the gB high-molecular-weight complex suggests that gB represents the major component and exists as a high-molecular-weight oligomer on viral envelopes under native conditions. In contrast, gC was cross-linked at a much lower efficiency and a number of components at intermediate molecular weights were detected. Initial studies on crosslinked products that were detectable with anti-gC antibody suggest that one of these products represents a gC dimer.

L45 ANSWER 69 OF 80 MEDLINE
90112667 Document Number: 90112667. PubMed ID: 2296088. Transmembrane envelope glycoproteins of human immunodeficiency virus type 2 and simian immunodeficiency virus SIV-mac exist as homodimers. Rey M A; Laurent A G; McClure J; Krust B; Montagnier L; Hovanessian A G. (Unite d'Oncologie Virale (CNRS URA 1157), Institut Pasteur, Paris, France.) JOURNAL OF VIROLOGY, (1990 Feb) 64 (2) 922-6. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB An 80-kilodalton glycoprotein (gp80) was produced in human immunodeficiency virus type 2 (HIV-2)-infected cells along with three envelope glycoproteins that we have recently reported: the extracellular glycoprotein (gp125), the envelope glycoprotein precursor (gp140), and the transient dimeric form of the precursor (gp300). gp125 and gp80 were detectable after the synthesis of gp140 and the formation of gp300. Using a specific monoclonal antibody, we showed here that gp80 is a dimeric form of the transmembrane glycoprotein gp36 of HIV-2. Dimerization of the envelope glycoprotein precursor and dimeric forms of the transmembrane glycoproteins were also observed in cells infected with simian immunodeficiency virus (SIV-mac), a virus closely related to HIV-2. Under routine conditions of our experiments (i.e., extraction by 1% Triton X-100 before polyacrylamide gel electrophoresis in sodium dodecyl sulfate [SDS]), monomeric forms of the transmembrane glycoprotein of HIV-2 and SIV-mac were only seldomly observed. Dimeric forms of the envelope precursors and the transmembrane glycoproteins are probably stabilized by extraction in the nonionic detergent Triton X-100 since such dimeric forms resist dissociation during subsequent electrophoresis in the presence of the ionic detergent SDS. However, the dissociation of these dimeric forms might occur when samples are prepared by extraction directly in 1% SDS or by incubation of the purified dimers at acidic pH. Dimerization of the envelope precursor might be required for its processing to give the mature envelope proteins, whereas the transmembrane dimer might be essential for optimal structure of the virion and thus its infectivity.

L45 ANSWER 68 OF 80 MEDLINE
90138886 Document Number: 90138886. PubMed ID: 2300552. Oligomeric structure of the human immunodeficiency virus type 1 envelope glycoprotein. Earl P L; Doms R W; Moss B. (Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD 20892.) PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1990 Jan) 87 (2) 648-52. Journal code: 7505876. ISSN: 0027-8424. Pub. country: United States. Language: English.

AB The envelope (env) glycoprotein of human immunodeficiency virus type 1 (HIV-1) consists of two noncovalently associated subunits, gp120 and gp41, that are formed gradient sedimentation, polyacrylamide gel electrophoresis, gradient sedimentation, polyacrylamide gel electrophoresis, and chemical cross-linking, we show that gp160 is synthesized as a monomer and subsequently forms stable homodimers. The molecule remains dimeric after cleavage to gp120/gp41 but is less stable to detergent solubilization and centrifugation. Analysis of wild-type and mutated env proteins indicated that interactions between the ectodomain regions of adjoining gp41 subunits are important for dimer formation and stability. A higher-order oligomeric form was also recovered, probably a tetramer consisting of two noncovalently associated dimers. The proposed subunit composition of the HIV-1 env protein is identical to that previously observed for the paramyxovirus envelope proteins F and HN.

L45 ANSWER 55 OF 80 MEDLINE
92219424 Document Number: 92219424. PubMed ID: 1313930. Transmembrane protein oligomers of caprine arthritis-encephalitis lentivirus are immunodominant in goats with progressive arthritis. McGuire T C; Knowles D P Jr; Davis W C; Brassfield A L; Stem T A; Cheevers W P. (Department of Veterinary Microbiology and Pathology, College of Veterinary Medicine, Washington State University, Pullman 99164-7040.) JOURNAL OF VIROLOGY, (1992 May) 66 (5) 3247-50. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB To dissect mechanisms of caprine arthritis-encephalitis lentivirus-induced arthritis, an undefined immunodominant viral glycoprotein, gp90 (G. C. Johnson, A. F. Barbet, P. Klevjer-Anderson, and T. C. McGuire, Infect. Immun. 41:657-665, 1983), was characterized. Monoclonal antibody to gp90 and specific antiserum to env gene products demonstrated that gp90 was a transmembrane protein (TM) dimer. Goats with progressive arthritis had high antibody titers to oligomeric and monomeric (38-kDa) TM.